

26526

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IV

Site Name: Trident North Landfill

EPA ID#: SCD 980558233

Alias Site Names: _____

City: Jedburg

County or Parish: Dorchester/Berkeley

State: SC

Refer to Report Dated: June 5, 1995

Report type: SIP

Report developed by: SCDHEC

DECISION:

☒ 1. Further Remedial Site Assessment under CERCLA (Superfund) is not required because:

☒ 1a. Site does not qualify for further remedial site assessment under CERCLA
(No Further Remedial Action Planned - NFRAP)

☐ 1b. Site may qualify for further action, but is deferred to: ☐ RCRA ☐ NRC

☐ 2. Further Assessment Needed Under CERCLA: 2a. (optional) Priority: ☐ Higher ☐ Lower

2b. Activity Type: ☐ PA ☐ SI ☐ ESI ☐ HRS evaluation

☐ Other: _____

DISCUSSION/RATIONALE:

Continued GW monitoring is sufficient; lack of environmental targets; site HRS score < 28.5.

Report Reviewed

and Approved by: Ralph O. Howard, Jr. Signature: Ralph O. Howard, Jr. Date: 8-11-95

Site Decision

Made by: Ralph O. Howard, Jr. Signature: Ralph O. Howard, Jr. Date: 8-11-95

PREscore 3.0 - PRESCORE.TCL File 07/25/94
HRS DOCUMENTATION RECORD
Trident North Landfill - 06/02/95

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1. Site Name: Trident North Landfill
(as entered in CERCLIS)
2. Site CERCLIS Number: SCD980558233
3. Site Reviewer: Peter N. Koufopoulos
4. Date: March 1, 1995
5. Site Location: Summerville/Dorchester-Berkeley, South Carolina
(City/County, State)
6. Congressional District:
7. Site Coordinates: Single

Latitude: 33°04'06.1"

Longitude: 080°12'46.7"

	Score
Ground Water Migration Pathway Score (Sgw)	0.00
Surface Water Migration Pathway Score (Ssw)	3.07
Soil Exposure Pathway Score (Ss)	0.00
Air Migration Pathway Score (Sa)	1.09

Site Score	1.63
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NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" (CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

PREscore 3.0 - PRESCORE.TCL File 07/25/94
WASTE QUANTITY
Trident North Landfill - 06/02/95

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1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: LANDFILL

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

WASTE QUANTITY

Trident North Landfill - 06/02/95

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID		LANDFILL	
b. Source Type		Landfill	
c. Secondary Source Type		N.A.	
d. Source Vol. (yd3/gal)	Source Area (ft2)	900000.00	0.00
e. Source Volume/Area Value		3.60E+02	
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)		0.00E+00	
g. Data Complete?		NO	
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)		0.00E+00	
i. Data Complete?		NO	
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)		3.60E+02	

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Asbestos	> 2	NO	0.0E+00	ppm
Chromium	< 2	NO	0.0E+00	ppm
Tetrachloroethene	< 2	NO	2.3E-02	ppm
Vanadium	< 2	NO	0.0E+00	ppm
Zinc	< 2	NO	5.2E+00	ppm

WASTE QUANTITY

Trident North Landfill - 06/02/95

3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

No. Source ID	Migration Pathways	Vol. or Area Value (2e)	Constituent or Wastestream Value (2f,2h)	Hazardous Waste Qty. Value (2k)
1 LANDFILL	GW-SW-SE-A	3.60E+02	0.00E+00	3.60E+02

WASTE QUANTITY

Trident North Landfill - 06/02/95

4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

Migration Pathway	Contaminant Values	HWQVs*	WCVs**
Ground Water	Toxicity/Mobility 1.00E+04	100	32
SW: Overland Flow, DW	Tox./Persistence 1.00E+04	100	32
SW: Overland Flow, HFC	Tox./Persis./Bioacc. 5.00E+04	100	32
SW: Overland Flow, Env	Etox./Persis./Bioacc. 5.00E+04	100	32
SW: GW to SW, DW	Tox./Persistence 1.00E+04	100	32
SW: GW to SW, HFC	Tox./Persis./Bioacc. 5.00E+05	100	56
SW: GW to SW, Env	Etox./Persis./Bioacc. 5.00E+06	100	100
Soil Exposure:Resident	Toxicity 1.00E+04	0	0
Soil Exposure: Nearby	Toxicity 1.00E+04	0	0
Air	Toxicity/Mobility 1.00E+02	100	10

* Hazardous Waste Quantity Factor Values

** Waste Characteristics Factor Category Values

Note: SW = Surface Water
 GW = Ground Water
 DW = Drinking Water Threat
 HFC = Human Food Chain Threat
 Env = Environmental Threat

PREscore 3.0 - PRESCORE.TCL File 07/25/94
GROUND WATER MIGRATION PATHWAY SCORESHEET
Trident North Landfill - 06/02/95

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GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer Aquifer:		
1. Observed Release	550	0
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	3
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	430
3. Likelihood of Release	550	430
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+04
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	32
Targets		
7. Nearest Well	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	0.00E+00
8d. Population (lines 8a+8b+8c)	**	0.00E+00
9. Resources	5	0.00E+00
10. Wellhead Protection Area	20	0.00E+00
11. Targets (lines 7+8d+9+10)	**	0.00E+00
12. Targets (including overlaying aquifers)	**	0.00E+00
13. Aquifer Score	100	0.00
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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 SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
 Trident North Landfill - 06/02/95

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release by Overland Flow		
2a. Containment	10	10
2b. Runoff	25	1
2c. Distance to Surface Water	25	20
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	210
3. Potential to Release by Flood		
3a. Containment (Flood)	10	10
3b. Flood Frequency	50	25
3c. Potential to Release by Flood (lines 3a x 3b)	500	250
4. Potential to Release (lines 2d+3c)	500	460
5. Likelihood of Release	550	460
Waste Characteristics		
6. Toxicity/Persistence	*	1.00E+04
7. Hazardous Waste Quantity	*	100
8. Waste Characteristics	100	32
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	0.00E+00
10d. Population (lines 10a+10b+10c)	**	0.00E+00
11. Resources	5	5.00E+00
12. Targets (lines 9+10d+11)	**	5.00E+00
13. DRINKING WATER THREAT SCORE	100	0.89

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

PREscore 3.0 - PRESCORE.TCL File 07/25/94
 SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
 Trident North Landfill - 06/02/95

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SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	460
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	5.00E+04
16. Hazardous Waste Quantity	*	100
17. Waste Characteristics	1000	32
Targets		
18. Food Chain Individual	50	2.00E+00
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	0.00E+00
19c. Pot. Human Food Chain Contamination	**	3.30E-04
19d. Population (lines 19a+19b+19c)	**	3.30E-04
20. Targets (lines 18+19d)	**	2.00E+00
21. HUMAN FOOD CHAIN THREAT SCORE	100	0.36

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

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 SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
 Trident North Landfill - 06/02/95

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	460
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	5.00E+04
24. Hazardous Waste Quantity	*	100
25. Waste Characteristics	1000	32
Targets		
26. Sensitive Environments		
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	0.00E+00
26c. Potential Contamination	**	5.00E+00
26d. Sensitive Environments	**	5.00E+00
(lines 26a+26b+26c)		
27. Targets (line 26d)	**	5.00E+00
28. ENVIRONMENTAL THREAT SCORE	60	0.89
29. WATERSHED SCORE	100	2.14
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)	100	2.14

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

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GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Trident North Landfill - 06/02/95

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release to Aquifer Aquifer:		
1. Observed Release	550	0
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	3
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	430
3. Likelihood of Release	550	430
Waste Characteristics		
4. Toxicity/Mobility/Persistence	*	1.00E+04
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	32
Targets		
7. Nearest Intake	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	0.00E+00
8d. Population (lines 8a+8b+8c)	**	0.00E+00
9. Resources	5	5.00E+00
10. Targets (lines 7+8d+9)	**	5.00E+00
11. DRINKING WATER THREAT SCORE	100	1.07

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
12. Likelihood of Release (same as line 3)	550	430
Waste Characteristics		
13. Toxicity/Mobility/Persistence/Bioacc.	*	5.00E+05
14. Hazardous Waste Quantity	*	100
15. Waste Characteristics	1000	56
Targets		
16. Food Chain Individual	50	0.00E+00
17. Population		
17a. Level I Concentrations	**	0.00E+00
17b. Level II Concentrations	**	0.00E+00
17c. Pot. Human Food Chain Contamination	**	1.50E-05
17d. Population (lines 17a+17b+17c)	**	1.50E-05
18. Targets (lines 16+17d)	**	1.50E-05
19. HUMAN FOOD CHAIN THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
20. Likelihood of Release (same as line 3)	550	430
Waste Characteristics		
21. Ecosystem Tox./Mobility/Persist./Bioacc.	*	5.00E+06
22. Hazardous Waste Quantity	*	100
23. Waste Characteristics	1000	100
Targets		
24. Sensitive Environments		
24a. Level I Concentrations	**	0.00E+00
24b. Level II Concentrations	**	0.00E+00
24c. Potential Contamination	**	3.00E+00
24d. Sensitive Environments (lines 24a+24b+24c)	**	3.00E+00
25. Targets (line 24d)	**	3.00E+00
26. ENVIRONMENTAL THREAT SCORE	60	2.00
27. WATERSHED SCORE	100	3.07
28. SW: GW to SW COMPONENT SCORE (Sgs)	100	3.07

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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 SOIL EXPOSURE PATHWAY SCORESHEET
 Trident North Landfill - 06/02/95

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SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+04
3. Hazardous Waste Quantity	*	0
4. Waste Characteristics	100	0
Targets		
5. Resident Individual	50	0.00E+00
6. Resident Population		
6a. Level I Concentrations	**	0.00E+00
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	0.00E+00
7. Workers	15	5.00E+00
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	0.00E+00
10. Targets (lines 5+6c+7+8+9)	**	5.00E+00
11. RESIDENT POPULATION THREAT SCORE	**	0.00E+00

* Maximum value applies to waste characteristics category.

** Maximum value not applicable.

*** No specific maximum value applies, see HRS for details.

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 SOIL EXPOSURE PATHWAY SCORESHEET
 Trident North Landfill - 06/02/95

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SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	5.00E+00
13. Area of Contamination	100	1.00E+02
14. Likelihood of Exposure	500	5.00E+01
Waste Characteristics		
15. Toxicity	*	1.00E+04
16. Hazardous Waste Quantity	*	0
17. Waste Characteristics	100	0
Targets		
18. Nearby Individual	1	1.00E+00
19. Population Within 1 Mile	**	2.70E-01
20. Targets (lines 18+19)	**	1.27E+00
21. NEARBY POPULATION THREAT SCORE	**	0.00E+00
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	0.00

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

PREscore 3.0 - PRESCORE.TCL File 07/25/94
 AIR PATHWAY SCORESHEET
 Trident North Landfill - 06/02/95

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AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	280
2b. Particulate Potential to Release	500	280
2c. Potential to Release	500	280
3. Likelihood of Release	550	280
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+02
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	10
Targets		
7. Nearest Individual	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	1.20E+01
8d. Population (lines 8a+8b+8c)	**	1.20E+01
9. Resources	5	0.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	0.00E+00
10c. Sens. Environments(lines 10a+10b)	***	0.00E+00
11. Targets (lines 7+8d+9+10c)	**	3.20E+01
AIR MIGRATION PATHWAY SCORE (Sa)	100	1.09E+00

* Maximum value applies to waste characteristics category.

** Maximum value not applicable.

*** No specific maximum value applies, see HRS for details.

NFRAP
8-11-95
Ralph G. Howard

**SITE INSPECTION PRIORITIZATION
TRIDENT NORTH LANDFILL
BERKELEY COUNTY
SCD 980 558 233**

Completed By: Peter N. Koufopoulos *PVK*
Reviewed By: Robert B. Cole *ABC*
**Site Screening Section
Bureau of Solid & Hazardous Waste Management
South Carolina Department of Health & Environmental Control
2600 Bull Street
Columbia, SC 29201**

Date Completed: June 5, 1995

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I. SCOPE OF WORK

In March 1991, the United States Environmental Protection Agency (USEPA) began implementation of significant revisions in the Hazard Ranking System (HRS) used to evaluate sites for inclusion on the National Priority List (NPL) for Superfund action. Because of the extent of the changes, sites that have had CERCLA Site Inspections (SI) completed prior to full implementation of the Revised HRS may be lacking the required data necessary to evaluate the site. A Site Inspection Prioritization (SIP) is designed to evaluate the data gaps, update existing file information and determine if the site may be a potential NPL candidate. This SIP consists of a file review, and did not include a site visit or sampling.

II. INTRODUCTION/EXECUTIVE SUMMARY

The Trident North Landfill is located on State Road 16, approximately one mile southwest of Interstate 26, in Jedburg, South Carolina. The landfill lies along the county line, with portions in both Berkeley and Dorchester Counties. The facility began operations in 1979, disposing of mostly inert bulk material. Fuel oil, wastewater treatment and grinding sludges were deposited in the original closed-out cell. Since 1980, Browning-Ferris Industries has assumed operations at the landfill. The other cells of the landfill, operating solely under BFI, are permitted for municipal and industrial waste; however, no hazardous waste disposal is allowed.

In March of 1991, the NUS Corporation completed an SI on the Trident North Landfill at the request of the EPA. The SI focused on the original cell operated by Trident Sanitation Services, Inc. As part of the SI, 21 samples were collected: six surface soil, six subsurface soil, four sediment, four monitoring well and two private well samples. Tetrachloroethene was found in on-site surface soil samples. Manganese and cobalt were found in sediment samples; and lead was detected in groundwater samples.

An estimated 1,773 people utilize groundwater within four miles of the site. Based on topographic maps, the closest drinking water well is approximately 800 feet east of the facility. Elevated lead was detected within this private well. The closest municipal well is approximately 1.5 miles southwest of the site.

Based on topographic maps, runoff from the site would probably enter one of two creeks; the Kelly Branch located along the northern border, and the Stanley Branch located along the southern border of the landfill. The branches are the probable points of entry. Cobalt and manganese were elevated within sediment samples, compared to their backgrounds. The branches would flow an estimated 1.7 miles westward toward the Cypress Swamp. No surface water intakes lie within the downgradient watershed of the site. The Cypress Swamp is the start of the downstream fishery and wetlands area.

Access to the site is only restricted by fencing along the western border and a locked gate at the entrance. The facility employs approximately 50 people. Tetrachloroethene was the only elevated constituent in on-site surface soils.

Due to the low level of on-site contamination and a limited number of targets in all pathways, the Trident North Landfill is given a low priority for further Federal Superfund activities. It is recommended that the Solid Waste Division of the Bureau of Solid and Hazardous Waste Management continue its routine groundwater monitoring of the site.

III. SITE DESCRIPTION, HISTORY AND WASTE CHARACTERISTICS

A. Background

Ownership History:

Unknown to 1979
J. M. Hodge
Route 4, Box 329
Summerville, SC 29483

1979 to Present
Landent Realty
237 Confederate Circle
Charleston, SC 29407 (Ref.1)

Operator History:

1979 to 1980
Trident Sanitation Services, Inc.
1934 Summerville Avenue
Charleston Heights, SC 29405

1980 to Present
Browning-Ferris Industries (BFI)

237 Farmington Road
Summerville, SC 29483

8607 Roberts Drive, Suite 100
Atlanta, GA 30350 (Ref.1)

B. Site Location and Description

The Trident North Landfill is located on State Road 16, approximately one mile southwest of Interstate 26, in Jedburg, South Carolina. The site lies within both Berkeley and Dorchester Counties. The site is surrounded by wooded and residential properties (Ref.2). The coordinates at the center of the site are 33 degrees, 4 minutes, 6.1 seconds north latitude and 80 degrees, 12 minutes, 46.7 seconds west longitude (Ref.3).

The landfill is approximately 150 acres and lies atop a ridge which runs east to west and gently slopes to the south and north. The site is only partially fenced; however, the entrance to the landfill has a locked gate. Kelly Branch is located to the north, and Stanley Branch is located to the south; both bound the facility. Both branches flow westward toward the Cypress Swamp (Ref.2,4).

C. Previous Investigations

In August of 1987, SCDHEC completed a Preliminary Assessment on the landfill (Ref.5). In March of 1989, an update to the Preliminary Assessment was completed by SCDHEC. The update recommended further action to determine the extent of any possible groundwater contamination based on elevated levels of TOC and chromium found in 1981 analytical results from routine sampling (Ref.1). In March of 1991, the NUS Corporation completed an SI on the Trident North Landfill at the request of the EPA. As part of the SI, 21 samples were collected: six surface soil, six subsurface soil, four sediment, four monitoring well and two private well samples (Ref.4).

D. Operational History and Waste Characteristics

The landfill has been in operation since 1979. Trident Services operated the site for approximately one year. Most of the waste present in the landfill is inert bulk material such as asbestos, concrete and lumber (Ref.6). On two occasions the landfill was allowed to accept fuel oil sludge, and on one occasion was permitted to bury wastewater treatment plant sludge. In 1980, permission was granted to bury grinding sludge reported to contain chromium, molybdenum and vanadium. The original cell operated by Trident Services is approximately 306,500 cubic yards (Ref.4).

The Trident North Landfill is not listed as a RCRA Generator (Ref.7). The following source was used to characterize the site:

- Landfill -- Over 900,000 yds³ of material containing various sludges with unknown constituents. Based on NUS calculations for the entire landfill (Ref.4).

IV. GROUNDWATER PATHWAY

Routine monitoring of the six on-site wells has shown no elevated levels of chromium or lead in groundwater since 1991 (Ref.8). A 200 foot confining unit lies approximately 75 feet below the landfill (Ref.9). The municipal wells and most private wells are screened below the confining unit (Ref.10,11). There are approximately 1,773 people using groundwater within the four mile radius (Ref.2). Due to the lack of contamination and the presence of a confining unit, the groundwater pathway will not be evaluated.

V. SURFACE WATER

A. Hydrologic Setting

Based on topographic maps, the runoff from the landfill will flow toward one of two perennial creeks; Kelly Branch, north of the site, and Stanley Branch, south of the site. Both branches, the probable points of entry (PPE), flow westward, approximately 1.7 miles toward the Cypress Swamp. The Kelly Branch flows into the Stanley Branch an estimated 500 feet from the swamp (Ref.2).

The Cypress Swamp flows from north to south, with an average flow rate of 92 cubic feet per second (cfs). The Ashley River starts approximately ten miles downstream with a flow rate >100 to <1000 cfs at the headwaters. The Ashley River completes the 15 mile downstream segment. The flow rate for the swamp was determined by multiplying the drainage area to a region specific flow contribution factor of 0.8 cfs/mi^2 (Ref.2,12). The Ashley River flow rate is an assumption based on increased flow ten miles downstream.

The Trident North Landfill lies outside the 500 year flood plain (Ref.13). The 2-year, 24-hour maximum rainfall value is 4.25 inches for the center of both Berkeley and Dorchester Counties (Ref.14).

B. Surface Water Targets

The Cypress Swamp sustains recreational fishing (Ref.4). No Federally endangered species reside along the 15 mile target distance limit (Ref.15). According to the topographic map, there are an estimated 23 frontage miles of wetlands starting at the branch/swamp confluence (Ref.2). No surface water intakes lie within the downgradient watershed of the site (Ref.16).

C. Surface Water Impact

As part of the 1991 NUS SI, four surface water sediment samples were collected. Samples were taken from both Kelly Branch and Stanley Branch. One background and one downgradient sample were taken on each branch. No organics were detected in the downstream sediment samples. Kelly Branch had elevated levels of manganese; while the Stanley Branch results showed elevated cobalt. None of these inorganics were elevated in on-site sampling (Ref.4).

Based on sample location and description, the NUS SI reversed the designation of the sediment background and downstream sample. Samples TL-SD-02 and TL-SD-04 are being used as the background sediment samples for this evaluation. The SI also stated that the branches were dry during the investigation. For this report, the branches are assumed to be perennial based on the topographic map.

VI. SOIL EXPOSURE PATHWAY & AIR PATHWAY

A. Physical Setting

The site crests at the center; the ridge runs east to west, sloping to the north and south toward surface water. The facility consists of three cells, two closed and one active. Only the western perimeter is fenced and the main gate is locked (Ref.2,4, Fig.1).

B. Soil and Air Targets

The nearest resident is located approximately 800 feet east of the site. No day care centers or schools are located within 200 feet of the site (Ref.2,17). The Red-cockaded Woodpecker, *Picoides borealis*, has been observed within one mile of the site. The total population within a four mile radius of the site is approximately 18,273 (Ref.18). The population estimates are characterized by the following table:

TABLE I: Population Information Within Four Miles of the Trident North Landfill*	
Radii (miles)	Berkeley/Dorchester County
On-site	50**
0 - ¼	31
> ¼ - ½	92
> ½ - 1	175
> 1 - 2	1,013
> 2 - 3	3,361
> 3 - 4	13,601
Total:	18,323

*Population based on census information assigned to each individual census tract (Ref.18)

**Estimation of on-site workers.

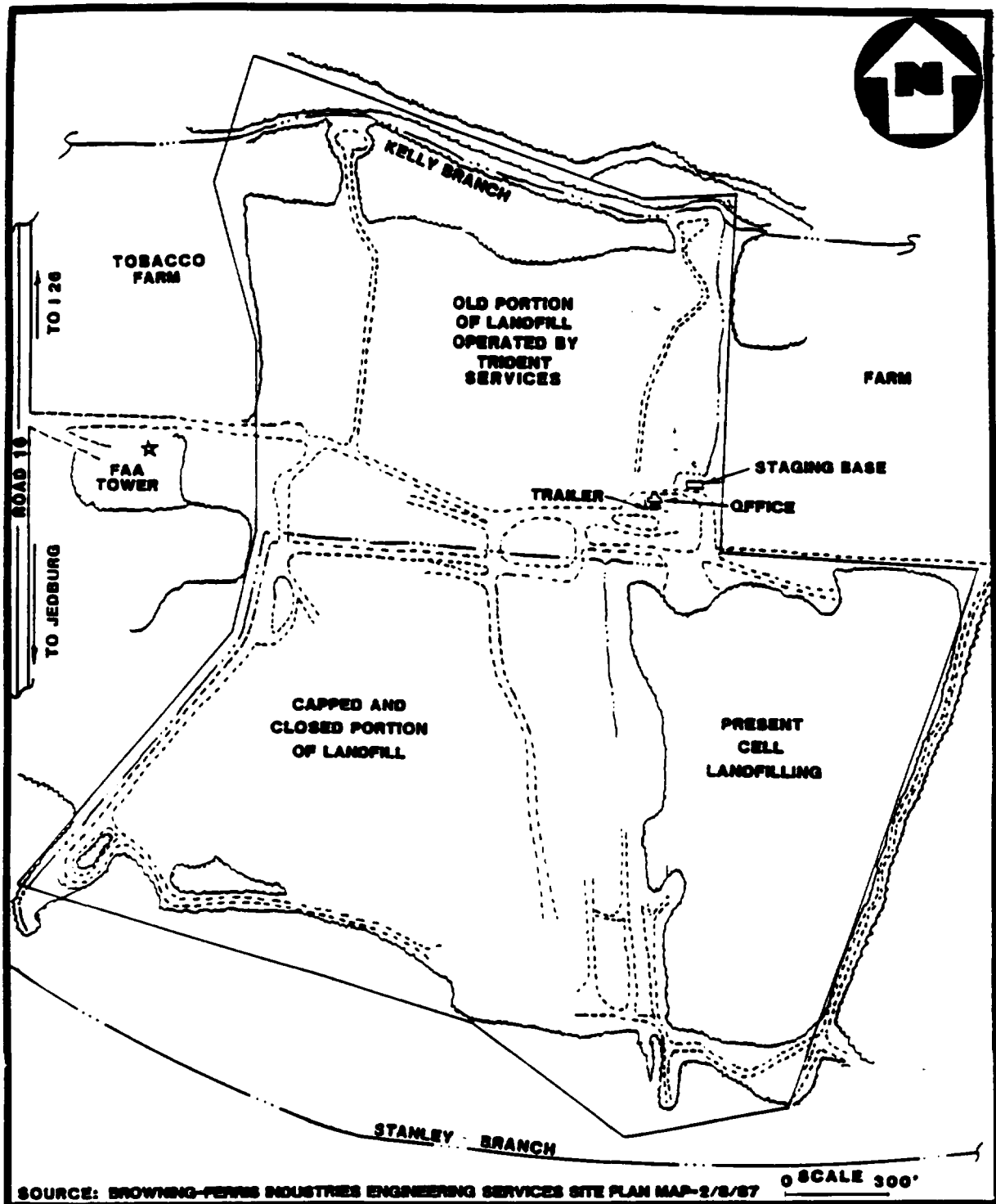
C. Soil and Air Impact

No air monitoring has been conducted at the facility (Ref.19). During the NUS SI, six surface soil and four sediment samples were collected including the backgrounds. Tetrachloroethene was detected in surface soil samples TL-SS-02 (23ppb) and TL-SS-03 (11ppb); Zinc was the only inorganic elevated in surface soil sample TL-SS-03 (5.2ppm) (Ref.4). Neither are above a health-based benchmark (Ref.20). Soil borings revealed no compounds above background levels (Ref.4). Due to the rural location of the landfill and type of operation conducted at the site, any soil exposure would be limited to on-site workers.

VII. SUMMARY AND CONCLUSIONS

Landfill operations have been occurring on-site since 1979. Mostly inert bulk material has been deposited within the cells for disposal. Reported isolated incidents of sludge disposal occurred when the landfill was operating under Trident Sanitation Services, Inc. The current permits for which BFI operate do not allow any disposal of hazardous waste.

The site has minimal detected contamination and a limited number of targets in all pathways. The Trident North Landfill is given a low priority for further Federal Superfund activities. It is recommended that the Solid Waste Division of the Bureau of Solid and Hazardous Waste Management continue its routine groundwater monitoring of the site.



**SITE LAYOUT MAP
TRIDENT NORTH LANDFILL
JEDBURG, BERKELEY / DORCHESTER COUNTIES,
SOUTH CAROLINA**

FIGURE 1

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PRELIMINARY ASSESSMENT UPDATE REPORT
TRIDENT NORTH LANDFILL
SCD 980 558 233
BERKELEY/DORCHESTER COUNTY
SOUTH CAROLINA

Prepared By:
David W. Nix
Bureau of Solid and Hazardous Waste Management
South Carolina Department of Health and Environmental Control

Submitted to the
Environmental Protection Agency on:
March 10, 1989

PRELIMINARY ASSESSMENT UPDATE
TRIDENT NORTH LANDFILL
SCD 980 558 233
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I. EXECUTIVE SUMMARY

The Trident North Landfill (BFI - Jedburg Landfill) is located along the Berkeley-Dorchester County line. The site is presently operated by Browning-Ferris Industries of South Atlantic, Inc.

The landfill occupies about 150 acres northeast of Summerville, South Carolina. Permits have been issued for industrial inert waste (IWP-163) and for normal domestic waste (DWP-129). The landfill has operated since 1979.

In 1980, chromium was found to exceed Federal Drinking Water standards in monitoring well #2, and in 1986, levels of Total Organic Carbon became elevated in monitoring wells. Because of the elevated levels of TOC, testing for volatile organic compounds was performed in 1988 as required by the Solid Waste Permitting Section of DHEC. This testing gave negative results, but this does not exclude the possibility that some non-volatile organic chemicals could be responsible for the elevated levels of Total Organic Carbon. Because of the contamination with chromium and the uncertainty surrounding the impact on groundwater quality from organic chemicals from this site, the Trident North Landfill is recommended for a Screening Site Investigation with a High Priority.

II. SITE BACKGROUND AND HISTORY

A. Ownership History

The 150 acre site of the Trident North Landfill (BFI Jedburg Landfill) was originally owned by Mr. J.M. Hodge (Rt. 4, Box 329, Summerville, SC 29483). Mr. Hodge sold the property to Landent Realty (A Partnership, 237 Confederate Circle, Charleston, SC 29407) in 1979 (Ref. 1, 2, 3).

Landent Realty leased the property to Trident Services, Inc. (1934 Summerville Avenue, Charleston Heights, SC 29405) for use as an Industrial Waste Landfill. Trident Services, Inc. was granted a permit to operate an industrial waste landfill (IWP-169) by SCDHEC on August 30, 1979 (Ref. 1, 6). Trident Services operated the landfill from 1979 until some time in 1980 when Browning Ferris Industries of South Atlantic purchased Trident Services and assumed operation of the landfill (Ref. 7). Browning Ferris Industries (BFI) operated the landfill under the industrial waste permit (IWP-163) from 1980 until a permit modification to accept domestic waste was granted for the Dorchester County portion of the landfill in 1984 (Ref. 8, 9, 10). In 1987, SCDHEC issued a new permit, DWP-129, for domestic waste disposal at the landfill (Ref. 11).

B. Site Description

The Trident North/BFI Jedburg landfill is located along State Road 16 approximately one mile southwest of Interstate 26 (Ref 1). The site lies on the Berkeley-Dorchester County line with about 60% of the landfill located in Dorchester County (Ref. 12). The landfill occupies approximately 150 acres (Ref. 3). The geographic coordinates for the

center of the landfill are 080 degrees, 12 minutes, and 44.0 seconds West longitude and 33 degrees, 04 minutes and 07.0 seconds North latitude (Ref. 12).

Prior to 1979, the site was cultivated agricultural land (Ref. 1). The site lies atop a ridge which runs east-west and which gently slopes to the south and north. Two creeks act as northern and southern boundaries. Kelly Branch is located to the north and drains into Cypress Swamp 1.9 miles downstream. Stanley Branch is located to the south and drains into Cypress Swamp about 2.0 miles downstream. Runoff from the site will flow into either Kelly Branch or Stanley Branch (Ref. 12). There is a 200 foot buffer zone maintained between the landfill boundary and the two streams (Ref. 13).

C. Regulatory History and RCRA Summary

The Trident North Landfill has never had any RCRA involvement with its operations.

The landfill has been inspected many times by the Trident District Solid Waste Consultant, John D. Ohlandt, with no significant problems encountered. An allegation of night dumping in 1984 was found to be unmerited upon investigation. No hazardous conditions, spills or other incidents have been reported at the landfill (Ref. 1).

D. Process and Waste Disposal History

Most of the waste present in the landfill is inert bulk materials such as lumber, concrete, metal bands, cardboard, shingles, tires, empty drums and asbestos. Department records show that on two occasions the landfill was allowed to accept fuel oil sludges, and on one occasion burial of a wastewater treatment plant sludge was permitted (Ref. 1, 2, 6, 8, 11). In 1980, permission was granted by DHEC for burial of grinding sludge from a ball-bearing manufacturer. The grinding sludge reportedly contained alloys of steel, chromium, molybdenum and vanadium (Ref. 1, 14).

Since 1984, the Berkeley County side of the landfill has been permitted (DWP-129) for the disposal of domestic waste. No hazardous wastes are allowed to be buried in this section of the landfill as per permit requirements (Ref. 10).

E. Remedial and Removal Actions

There have been no remedial or removal actions associated with the Trident North Landfill.

F. Demography and Regional Setting

The Trident North Landfill is located in a rural area Northwest of Summerville, South Carolina, with portions of the landfill located in both Berkeley and Dorchester Counties (Ref. 12).

Based on topographic map analysis, there are approximately 4275 people living within a three-mile radius of the site. Also within the 3-mile radius is about one-third of the town of Summerville (population 6863; 1980 Census), yielding an additional estimated 2288 people within the 3-mile radius for a total of 6563 people. According to Summerville city officials, the population of the town has more than quadrupled since 1980, therefore, the estimate of 6563 people within the 3-mile radius may be grossly underestimated (Ref. 1, 12).

The site is located within 2500 feet of the J.E. Locklair Jr. Memorial Airport, and as a condition of operation, the Federal Aviation Administration must review and approve all applications and permits for waste disposal at the site. This is to insure that waste accepted at the landfill does not attract birds which could present a hazard to airplane traffic at the airport (Ref. 4, 12).

III. GROUNDWATER PATHWAY

A. Regional Hydrogeology

The geologic units of concern underlying the site are the shallow undifferentiated Pleistocene Sands (depth = 0 - 75 ft), the Cooper Formation (depth = 75 - 275 ft), and the Santee Formation (depth = 275 - 500 ft) (Ref. 15).

The Pleistocene sands are a heterogenous mixture of sands and silts with an approximate hydraulic conductivity of 1×10^{-3} cm/sec. These sands comprise the unsaturated zone and the shallow aquifer unit (Ref 15).

The Cooper Formation is composed of silts, silty clays and clays with an approximately hydraulic conductivity of 1×10^{-7} cm/sec. The Cooper Formation forms a hydraulic barrier between the Pleistocene sands and the Santee Formation (Ref. 15).

The Santee Formation is a fossiliferous limestone with an approximate hydraulic conductivity of 1×10^{-3} cm/sec. The Santee Formation is the major source of privately supplied potable water in the area (Ref. 15).

Neither the shallow sands nor the Santee Formation are sole source aquifers (Ref. 15).

The depth to groundwater in the shallow sands is approximately 20 feet, based on water level measurements from on-site monitoring wells (Ref. 15).

The predominant groundwater flow direction in the shallow sands breaks to both the north and south towards Kelly Branch and Stanley Branch (Ref. 15). The general groundwater flow direction in the Santee Limestone is towards the south-southeast (Ref. 16).

B. Ground Water Use

A well inventory within a radius of four-miles of the site revealed that groundwater use from the Santee Limestone consists of private domestic supply wells. The nearest private residence well is 200 feet east of the site. The nearest public supply well is 2500 feet north of the site (Ref. 5, 12, 15).

There are 576 houses within the four-mile radius that rely on groundwater for their potable drinking water as determined from a topographic map analysis of water line distribution areas. Assuming 3.8 people per household the 576 houses yields a population of 2188.8 for the four-mile radius (Ref. 12).

Based upon water-line distribution and analysis of demographics from the topographic maps, there are (at least) approximately 1448 people within the 3-mile radius who rely on private wells for potable water. The Dorchester County Water Authority Administrator, Oscar Black, has stated that, to his knowledge, private wells in the area are at least 300 feet deep (Ref. 1).

The Dorchester County Water Authority supplies water to approximately 1900 individuals from two municipal wells within the three-mile radius of the site (Ref. 1).

The City of Summerville also draws water from a well within the 3-mile radius. Water from this well is mixed with water from other sources from outside the 3-mile radius. The City of Summerville water system serves 47,500 people (Ref. 1).

Public supply wells are screened in the Santee Limestone and Black Mingo aquifers, with the most shallow well at 386 feet deep (Ref. 1).

C. Ground Water Impact

Since 1980, the shallow groundwater has been monitored at the site. Problems with the groundwater have been detected beginning with elevated levels of chromium in 1981 (Ref. 20). In 1988, monitoring well samples were tested for volatile organic compounds because of elevated TOC results with no volatile organics detected (Ref. 20). No testing was done for semivolatile compounds or pesticides at this time. TOC is an indication of the non-volatile Organic Carbon content, therefore, testing should have been performed for the non-volatile organic compounds (Ref. 17).

Since thorough testing for organic chemical contamination was not done, an accurate assessment of the severity of the impact of the Trident North/BFI Jedyburg Landfill on groundwater cannot be accomplished. Levels of heavy metals, such as chromium, have not exceeded Federal Drinking Water standards since the 1981 incident. Resampling of the monitoring wells should be undertaken with volatile organics, semi-volatile organics and pesticides included in the testing program. Until such testing is

performed, it will not be possible to determine the severity of the threat to the groundwater in the area, and because of this uncertainty the Trident North/BFI Jedburg Landfill should be scheduled for a Screening Site Investigation with a High Priority.

IV. SURFACE WATER PATHWAY

A. Regional Characteristics

Surface water runoff from the site will enter drainage ditches and discharge into both Kelly Branch to the north and Stanley Branch to the south. These branches merge to the west of the site and drain into Cypress Swamp. Cypress Swamp is the source of the Ashley River (Ref. 12).

B. Surface Water Use

The fifteen-mile distance limit is located on the headwaters of the Ashley River south of Summerville. There are no surface water intakes located along the 15-mile distance of the river (Ref. 12, 18).

There are several small ponds along the surface water pathway which have road access and may be used for recreational fishing (Ref. 12).

There are no endangered species identified along the surface water pathway (Ref. 19).

C. Surface Water Impact

There are two creeks adjacent to the landfill which are fed by runoff and the shallow groundwater aquifer. Leachate discharges from the landfill would enter one of these creeks. There are no known surface water intakes within 15-miles downstream from the site. The site affects only one watershed (Ref. 12).

V. AIR PATHWAY

No evaluation of the potential for releases of hazardous substances to the atmosphere has been made for the Trident North Landfill.

VI. ON-SITE EXPOSURE

A. Direct Contact Mode

The Trident North Landfill is secured and access is controlled so that there should not be any potential danger to the public for direct contact with waste deposited at the site (Ref. 11).

B. Fire and Explosion Mode

The landfill is maintained according to standards required by State law and receives daily cover, thereby making the threat of a fire or explosion negligible (Ref. 11).

VII. CONCLUSIONS AND RECOMMENDATIONS

Because of the contamination of groundwater with chromium and the uncertainty surrounding the potential for groundwater contamination with organic chemicals from the Trident North/BFI Jedburg Landfill, the site is recommended for a Screening Site Investigation with a High Priority.

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Site Screening Section
Bureau of Solid & Hazardous Waste Management

MEMORANDUM

TO: Trident North Landfill File
FROM: Peter N Koufopoulos *PK*
RE: Latitude/Longitude Calculations for Trident North Landfill Site

Topographic Quad: Summerville, SC
Date: 1990

Latitude at 0 ticks on scale = $33^{\circ} 00' 00''$
Site located at tick #31.5
Latitude at 19.2 ticks on scale = $33^{\circ} 2' 30.0''$

Longitude at 0 ticks on scale = $80^{\circ} 07' 30''$
Site located at tick #34.2
Longitude at 16.2 on scale = $80^{\circ} 10' 0.0''$

SITE COORDINATES =

$33^{\circ} 4' 6.1''$ LATITUDE

$80^{\circ} 12' 46.7''$ LONGITUDE

R-586-2-1-

FINAL REPORT
SCREENING SITE INSPECTION, PHASE II
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA
EPA ID #: NO. SCD980558233

Approved
3/5/91
Recommend. Further
Action
Earl Boyer

Prepared Under
TDD No. F4-9007-35
CONTRACT NO. 68-01-7346

Revision 0

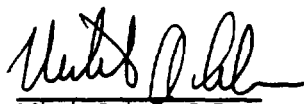
FOR THE

WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

MARCH 4, 1991

NUS CORPORATION
SUPERFUND DIVISION

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EXECUTIVE SUMMARY

Trident North/Browning-Ferris Industries (BFI) Jedburg Landfill (Trident North Landfill) is located along State Road 16 approximately 1 mile southwest of Interstate 26. The facility, which began landfilling operations in 1979, is currently active today. Most of the waste disposed of in the oldest portion of the landfill operated by Trident Services, Inc. consisted of inert bulk materials such as lumber, concrete, metal bands, cardboard, shingles, tires, empty drums, and asbestos. On some occasions, fuel oil and wastewater treatment sludges were accepted as well as grinding sludge.

Presently, BFI owns and operates the sanitary landfill under Industrial and Domestic Waste Permit DWP-129. The facility receives household waste and construction debris as well as special permitted asbestos and industrial wastes.

The 150-acre facility lies atop a ridge which runs east-west and gently slopes to the north and south. The facility is underlain by about 30 feet of surficial soils, and the depth to groundwater is approximately 20 feet below land surface (bls). The Cooper Formation, an impermeable sandy limestone that acts as a confining unit lies below the surficial soils, is about 150 feet thick in the landfill area. Below the Cooper Formation are several formations, two of which comprise the drinking water aquifer. These are the Santee Limestone and the Black Mingo Formation. These units are about 450 feet thick and lie about 180 feet bls.

The groundwater pathway is of primary concern at the facility. Approximately 546 households use private wells for drinking water within 4 miles of the landfill. Two municipal wells are located between the 2- and 3-mile radii and serve about 16,875 households. Depths of both private and municipal wells extend to at least 400 feet bls, and therefore below the confining Cooper Formation.

The surface water pathway is of concern because both Kelly Branch and Stanley Branch border the facility to the north and south, respectively. The intermittent stream migration path, however, extends for about 2 miles before entering Cypress Swamp.

Soil exposure is of lesser concern because access to the landfill is difficult. The western boundary is fenced with a locked gate, and private farmland surrounds the rest of the facility.

Chromium is the main contaminant of concern at the facility. It was found in all media sampled except for sediment and groundwater from private wells. Shallow, surficial groundwater from

monitoring wells contained chromium; however, groundwater from the deep private wells did not. Groundwater from one private well did have elevated levels of lead as did shallow groundwater from a monitoring well. Based on the analysis of possible migration pathways, the results of the sampling investigation, and the information obtained from the references, FIT 4 recommends that Phase I of a Listing Site Inspection be initiated at Trident North Landfill.

1.0 INTRODUCTION

The NUS Corporation Region 4 Field Investigation Team (FIT) was tasked by the U.S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Phase II Screening Site Inspection (SSI) at the Trident North Landfill facility in Jedburg, Dorchester/Berkeley counties, South Carolina. The investigation was performed under the authority of the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). The task was performed to satisfy the requirements stated in Technical Directive Document (TDD) number F4-9007-35. The field investigation was conducted during the week of during the week of September 17, 1990.

1.1 OBJECTIVES

The objectives of this inspection were to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection sought to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation was made regarding future activities at the site.

1.2 SCOPE OF WORK

The objectives were achieved through the completion of a number of specific tasks. These activities were to:

- Obtain and review background materials relevant to HRS scoring of site.
- Obtain an aerial photograph and a site layout map of site.
- Obtain information on local water systems.
- Evaluate target populations associated with the groundwater, surface water, air, and onsite exposure pathways.
- Conduct a survey of the two nearest private wells.

- **Develop a site sketch.**
- **Conduct a geophysical screening of the oldest landfill cells to determine whether buried drums or areas of high anomalies were present.**
- **Collect environmental surface soil, subsurface soil, sediment, monitoring well, and private well samples.**

2.0 SITE CHARACTERIZATION

2.1 SITE BACKGROUND AND HISTORY

Trident North/Browning-Ferris Industries (BFI) Jedburg Landfill (Trident North Landfill) is located in Jedburg, South Carolina, along State Road 16 approximately 1 mile southwest of Interstate 26. The facility lies on the Berkeley-Dorchester County line with about 60 percent of the landfill located in Dorchester County (Ref. 1, p. 1). The geographic coordinates for the center of the landfill are 80°12'49"W longitude and 33°04'12"N latitude (Appendix A).

The facility which began landfilling operations in 1979 is still active today. Prior to use as a landfill, the area was cultivated, agricultural land. The land was originally owned by Mr. J.M. Hodge of Summerville, South Carolina, who sold the property to Landent Realty of Charleston, South Carolina, in 1979 (Ref. 1, p. 1).

Landent Realty leased the property to Trident Services, Inc. for use as an industrial waste landfill. Trident Services, Inc. was granted a permit to operate the landfill (IWP-169) by the state of South Carolina on August 30, 1979. In 1980, BFI of South Atlantic, Inc. purchased Trident Services and assumed operation of the landfill. BFI managed the landfill under an Industrial Waste Permit (IWP-163) from 1980, until a permit modification to also accept domestic waste was granted for the Dorchester County portion of the landfill in 1984. In 1987, the state issued a new permit, DWP-129, for industrial and domestic waste disposal at the landfill (Ref. 1, p. 1).

Most of the waste disposed of in the oldest portion of the landfill, operated by Trident Services, Inc., consisted of inert bulk materials such as lumber, concrete, metal bands, cardboard, shingles, tires, empty drums, and asbestos. Department records show that on two occasions the landfill was allowed to accept fuel oil sludges and, on one occasion, burial of wastewater treatment plant sludge was permitted. In 1980, permission was granted by the state for burial of grinding sludge from a ball-bearing manufacturer. The grinding sludge reportedly contained alloys of steel, chromium, molybdenum, and vanadium (Ref. 1, p. 2).

Since 1984, the landfill has been permitted for the disposal of industrial and domestic waste. No hazardous wastes are allowed to be buried in the landfill as per permit requirements. There have been no remedial or removal actions associated with Trident North Landfill (Ref. 1, p. 2).

Presently, the landfill is known as the BFI Jedburg Landfill and receives waste from Charleston, Berkeley, and Dorchester counties (Tri-Counties) area. The facility landfills household trash, construction debris, and is permitted to take asbestos and industrial waste. Industrial wastes include mostly papermill byproduct sludges disposed of by Westvaco, a local industrial complex (Ref. 2). The permitted wastes must be identified along with supporting laboratory analysis and approval from both the state and BFI (Ref. 3, p. 4).

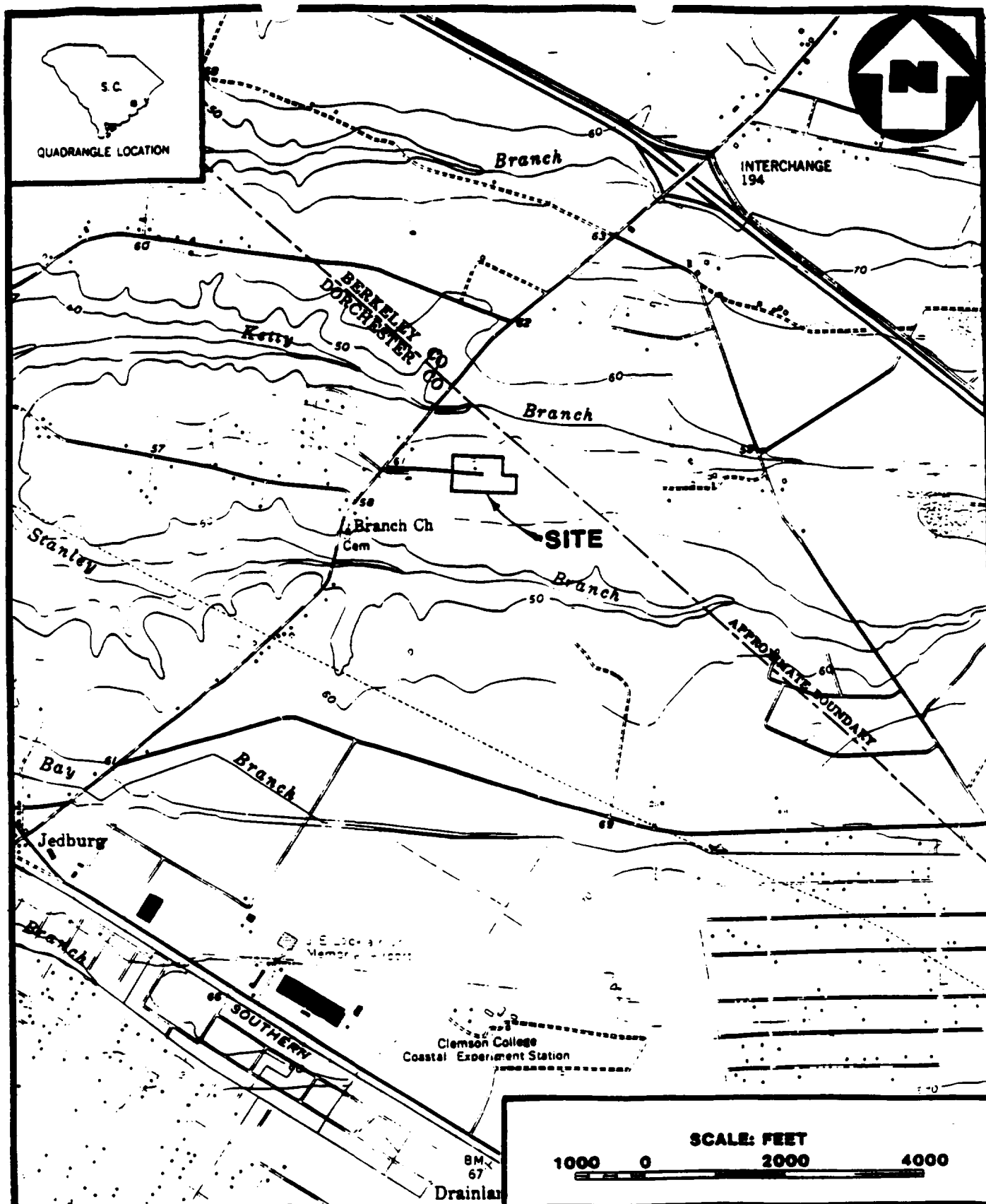
Since 1980, the shallow groundwater has been monitored at the landfill. Problems with the groundwater have been detected beginning with elevated levels of chromium in 1981. In 1988, monitoring well samples were tested for volatile organic compounds because of elevated total organic carbon (TOC) results. However, no volatile organics were detected. No testing was done for semivolatile compounds or pesticides at this time. TOC is an indication of the nonvolatile organic carbon content. Prior to this investigation, levels of heavy metals, such as chromium, have not appeared to exceed Federal Drinking Water Standards since the 1981 incident (Ref. 1, p. 1).

2.2 SITE DESCRIPTION

The approximately 150-acre facility lies atop a ridge which runs east-west and gently slopes to the south and north (Ref. 1, p. 2). Only the western boundary appeared to be fenced. The entrance to the landfill had a locked gate as well. Kelly Branch is located to the north, and Stanley Branch is located to the south; both bound the facility (Appendix A).

During the investigation, only the southeastern portion of the landfill was being used to dispose of wastes. At the center of the slightly hilly facility was the scale-house and office trailer. Several dirt hauling roads sectioned the facility into three areas: the northern oldest cell used by Trident Services, a southwestern cell that was capped and closed, and the presently used southeastern cell. The southwestern section was surrounded by drainage ditches, the dry beds of Kelly Branch, and Stanley Branch comprised the northern and southern boundary of the facility. A Federal Aviation Administration radar station and tower are located adjacent and to the west of the landfill. A farm borders the eastern facility boundary (Refer to Figures 1 and 2).

Since groundwater problems were detected in 1981, it seemed most feasible to focus this investigation on the approximately 19-acre and 10-foot-deep cell that was first landfilled in the northern portion of the facility. It was believed that industrial wastes that might have been disposed of in the cell were responsible for the leaching metals detected in the past (Ref. 1, p. 2). Since BFI follows very strict guidelines as to what can or cannot be disposed of, the most recent cells were not considered as much of an impact on groundwater (Ref. 2). Recent monitoring well results appear to show no significant contamination (Ref. 4).

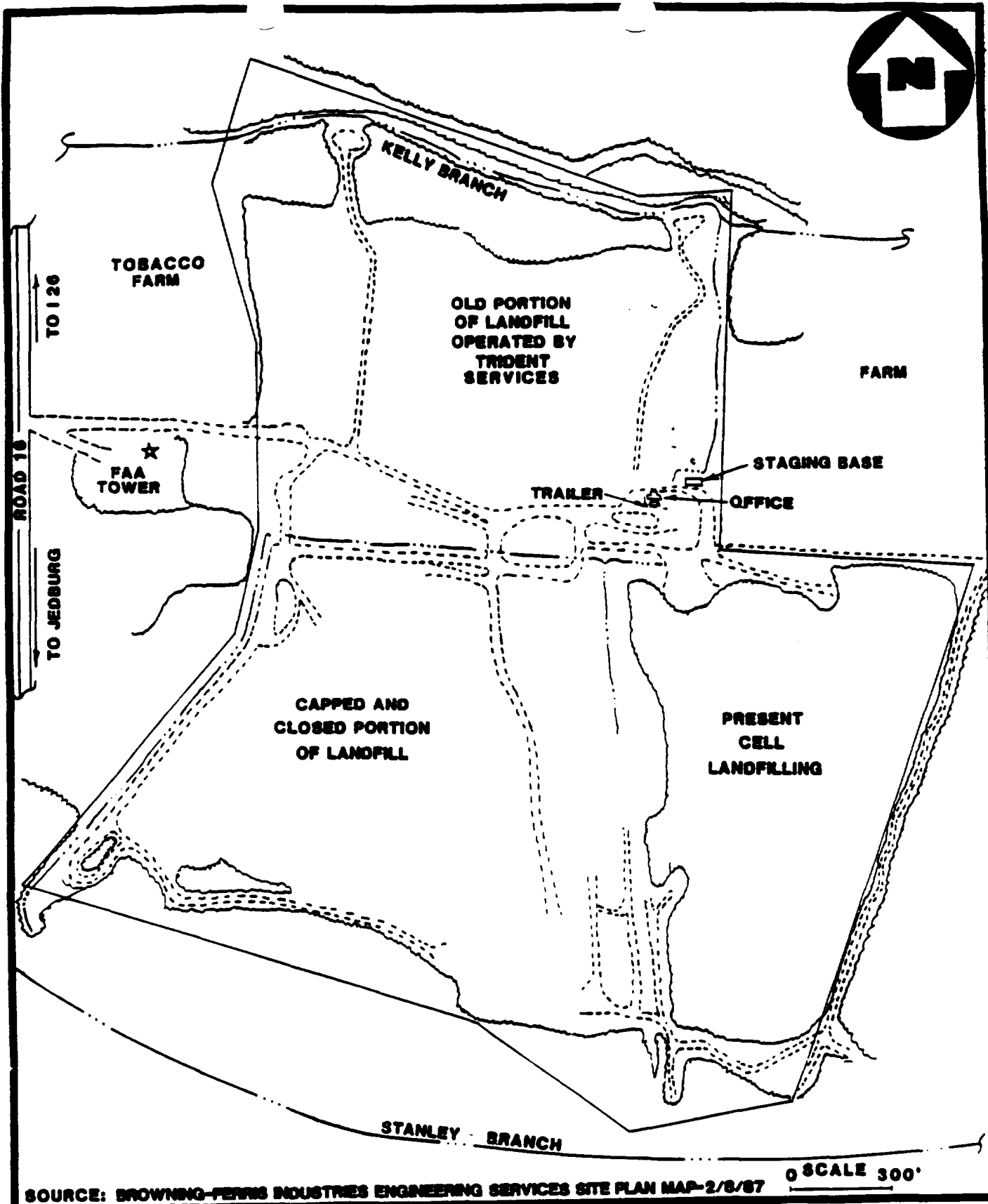


BASE MAP IS A PORTION OF THE U.S.G.S. 7.5 MINUTE QUADRANGLE MAP SUMMERVILLE, SOUTH CAROLINA, 1979.

**SITE LOCATION MAP
TRIDENT NORTH LANDFILL
JEDBURG, BERKELEY / DORCHESTER COUNTIES,
SOUTH CAROLINA**

FIGURE 1





**SITE LAYOUT MAP
TRIDENT NORTH LANDFILL
JEDBURG, BERKELEY / DORCHESTER COUNTIES,
SOUTH CAROLINA**

FIGURE 2



3.0 REGIONAL POPULATIONS AND ENVIRONMENTS

3.1 POPULATION AND LAND USE

3.1.1 Demography

The population within 1 mile of the facility is very small. There are about 27 houses in a small subdivision across County Road 16 from the landfill access road (Ref. 5, p. 4).

According to the Graphic Exposure Modeling System (GEMS) data base, the population within the 4-mile radius from the facility is between 0 to 0.25 mile: 0; 0.25 - 0.5 mile: 0; 0.5 - 1 mile: 0; 1 - 2 miles: 0; 2 - 3 miles: 4,742; 3 - 4 miles: 7,961 (Ref. 6). The topographic maps show at least 35 households within 0.5 mile. The population may be therefore estimated to be about 133 (35 households x 3.8 persons/household). An additional 40 households appear to be located between 0.5 and 1 mile. The population may therefore be estimated to be about 152. The total population within 1 mile may be estimated at 285. Between 1 and 2 miles, approximately 225 households appear to exist. The population in this segment can be approximated at 855. Between the 2 and 4 mile radii, and to the southeast, is the population center of Summerville. Estimates from the GEMS data base may be considered reasonable for this segment of the study area (Ref. 6, Appendix A).

3.1.2 Land Use

Most of the area within 3 miles of the facility is sparsely populated. The generally rural study area is farmed, with many wooded lots lining State Road 16. There are several agricultural plots located around the landfill. A small, approximately 5-acre tobacco farm is northwest of the landfill property along the access road. Another cultivated field is located just east of the staging base and landfill in general (Ref. 5, pp. 2, 3, 4). Cypress Swamp is located to the west-northwest of the facility between the 2- and 4-mile radius (Appendix A).

3.2 SURFACE WATER

3.2.1 Climatology

Trident North Landfill is located in the Atlantic Coastal Plain Physiographic Province and the Atlantic and Gulf Coastal Plain hydrogeologic setting (Ref. 7, plate 28; 8, pp. 270, 271). The climate of the area is characterized by moderate temperatures and humid days (Ref. 9, p. 7). The net annual precipitation is 5 inches, and the maximum 1-year, 24-hour rainfall is 3.5 inches (Ref. 10, pp. 43, 63; 11, p. 93).

3.2.2 Overland Drainage

Drainage ditches along the eastern and western boundaries, as well as the center portion of the landfill, discharge run-off into Kelly Branch and Stanley Branch. Both join together and enter Cypress Swamp, about 2 stream miles west of the facility. About 9 stream miles from the confluence point with Cypress Swamp, the headwaters of the Ashley River begin. The remainder of the 15-mile, surface water pathway continues along the headwaters of the Ashley River (Appendix A).

3.2.3 Potentially Affected Water Bodies

Contaminants migrating off site and flowing to Cypress Swamp may potentially affect recreational fishing. Although most of the property along the swamp is privately owned, fishermen get permission to access the swamp. Small boats such as canoes and johnboats are used, since the water is shallow. The catch includes mudfish, catfish, bream, cruppy, bass, and other panfish (Ref. 12). There are two endangered plant species located about 13 stream miles along the surface water migration pathway. They are the Pilea fontina and the Carex oligocarta (Ref. 13).

3.3 GROUNDWATER

3.3.1 Hydrogeology

The landfill is underlain by surficial soils that consist of discontinuous layers of sand and clay with minor amounts of shell and limestone extending to a depth of approximately 30 feet below land surface (bls) (Ref. 9, pp. 12, 13, 41). These surficial soils and overlying recent unconsolidated materials comprise the shallow aquifer, which occurs under water-table conditions. The depth to groundwater in the shallow sands is approximately 20 feet bls (Ref. 1, p. 3). Transmissivities of the shallow aquifer

are generally less than 600 ft²/day (Ref. 9, p. 43). The hydraulic conductivity for sediments similar to these is 1.0×10^{-3} cm/sec (Ref. 14, p. 29).

The Cooper Formation occurs beneath the surficial soils and is an impermeable sandy limestone that acts as a confining zone between the shallow aquifer and the lower Santee Limestone aquifer (Ref. 9, p. 41). The Cooper Formation is approximately 150 feet thick in the landfill area (Ref. 9, p. 12, 13). The hydraulic conductivity for sediments similar to these is 1.0×10^{-7} cm/sec (Ref. 12, p. 29). Formations that underlie the Cooper Formation, in descending order are the Santee Limestone, the Black Mingo Formation, the Peedee Formation, the Black Creek Formation, and the Middendorf Formation (Ref. 9, p. 13). The Santee Limestone is a fossiliferous, slightly glauconitic limestone approximately 110 feet thick (Ref. 9, pp. 13, 18). The formation dips southward at 8 ft/mile and increases in thickness toward the south (Ref. 9, p. 18). The Black Mingo Formation consists of sand and limestone in the upper portion of the unit, and clay and shale in its lower half (Ref. 9, p. 17). The formation is approximately 340 feet thick, with the base of the zone 565 feet bls in this area (Ref. 9, p. 13). The Peedee Formation is represented by calcareous clays and sands that are approximately 350 feet thick (Ref. 9, pp. 13, 17). The Black Creek Formation consist of interbedded sands and clays that are 625 feet thick (Ref. 9, pp. 13, 17). The Middendorf Formation is composed of clays in the lower half with silty sand in the upper. It is encountered at a depth of 1,520 feet bls in the landfill area (Ref. 9, pp. 11, 13, 17).

The primary aquifer used in this area is contained within the Santee Limestone and Black Mingo Formation (Ref. 9, pp. 30-34). A significant amount of hydraulic interconnection occurs between the base of the Santee and upper half of the Black Mingo Formation in this area (Ref. 9, p. 32). Most wells are of open-hole construction and penetrate into the upper sand beds of the Black Mingo Formation (Ref. 9, p. 31). These wells are under artesian conditions due to the overlying confining clays of the Copper Formation and the basal Black Mingo (Ref. 9, p. 30). The water level is approximately 20 feet bls in the landfill area (Ref. 9, p. 33). Water yields of 432,000 gal/day have been reported from wells in this area (Ref. 9, p. 31). The hydraulic conductivity for sediments similar to these is approximately 1.0×10^{-3} cm/sec (Ref. 1, p. 3).

Groundwater does occur in the deeper formations, but due to the quantity of water and expense involved in completing wells, these aquifers are not used in the Summerville area (Ref. 9, pp. 27-30). Rainfall upon the outcropping aquifer-bearing formations (updip and well outside of the study area) serves as the main source of recharge for aquifers present below the landfill (Ref. 9, p. 32). Water quality from the Santee Limestone-Black Mingo formations aquifer is generally good in this area but deteriorates downgradient due to increasing amounts of sodium, fluoride, and chlorides (Ref. 9, pp. 44, 53).

3.3.2 Aquifer Use

The aquifer of concern in the Trident North Landfill area is contained within the Santee Limestone and Black Mingo formations, between 180 and 630 feet bls (Ref. 9, pp. 30-34). Both private wells and municipal wells are at least completed at depths beginning at 400 feet bls (Ref. 15).

Approximately half the area within the 4-mile radius is provided with drinking water by either the city of Summerville or Dorchester County. The city of Summerville serves 15,300 connections with water drawn from five wells. One well is located between the 2- and 3-mile radii and is 1,800 feet deep. Water from all the wells is mixed prior to distribution. Dorchester County serves 1,575 connections, with water drawn from seven wells. One well, 450 feet deep, is located between the 2- and 3-mile radii. Water drawn from all seven wells is mixed prior to distribution (Ref. 5, pp. 6-7).

The portion of the population located within the 4-mile radius not served by a municipal system uses private wells for drinking water. Private wells appear to be approximately 400 feet deep in the area (Ref. 15). Approximately 291 households within 3 miles of the facility use private wells for their water supply. The population served by groundwater obtained from private wells is, therefore, 1,106 (291 households x 3.8 people/household). Between the 3- and 4-mile radii, an additional 255 households use private wells to obtain water. The population served is, accordingly, 969 (255 households x 3.8 people/household). The nearest private well is about 1,000 feet east or west of the facility (Appendix A).

4.0 FIELD INVESTIGATION

4.1 GEOPHYSICAL SCREENING

The purpose of the geophysical screening was to provide the investigation team with information that would aid in the selection of environmental sampling locations. To accomplish this task, the northern portion of the landfill was surveyed with an EM-31D Non-Contacting Terrain Conductivity Meter and a Proton Precession Magnetometer (Figure C-1, Appendix C). Both instruments were calibrated according to standard operating procedures in a plowed field located approximately 400 feet east of the landfill office. After calibration, a background survey was performed. A total of five conductivity and magnetic readings each were taken along a line oriented east-west at 25-foot intervals. The average readings for these stations were used as background values for comparison with onsite data points. Background, magnetic readings varied from 51,634 to 51,640 gammas and averaged 51,637 gammas. Background conductivity readings varied from 16.2 to 16.8 millimhos per meter (mmhos/m) and averaged 16.5 mmhos/m.

Before conducting the survey, a grid was laid over the northern section of the landfill using a Brunton compass and measuring tape. The grid was laid with lines oriented east-west. Stations were spaced 50 feet apart, while grid lines were spaced 25 feet apart. A total of 175 conductivity readings and 184 magnetic readings were obtained for the survey. Measurements recorded during the survey are listed on Field Data Sheets contained in Appendix C along with contour maps for the respective surveys (Figures C-2, C-3).

The majority of the landfill had anomalous conductivity and magnetic readings. Conductivity readings varied from 19 to 252 mmhos/m. Magnetic readings varied from 50,720 to 52,856 gammas. The most obvious anomalous feature observed from contouring the data points is the north-south alignment of conductivity and magnetic high points which generally overlap one another. These features probably show the alignment of trenches used for waste disposal and represent the areas of greatest concentration of metal-bearing wastes.

The results of the survey were inconclusive insofar as determining the edge of the landfill. The intent was to use magnetic data to show the edge of the landfill. Areas of high ground conductivity outside of the landfill boundary then would be assumed to be from groundwater that contained high concentrations of ions associated with waste disposal. Due to time constraints and the thick underbrush located at the northern portion of the landfill property, this objective was not

accomplished during this survey. Any further investigation of the landfill should make use of the results obtained during this survey.

4.2 FIELD ANALYTICAL SUPPORT PROJECT (FASP)

Field Analytical Support Project (FASP) was used to determine the concentration of chromium in the background sample FA-SS-01. Surface soil sample FA-SS-01 was collected in an 8-ounce glass jar and was delivered to the NUS Corporation base lab located in Clarkston, Georgia. Aqueous samples suitable for atomic absorption analysis were prepared using the soil sample microwave digestion procedure described in the USEPA Contract Laboratory Program Statement of Work for Inorganics Analysis (Document Number ILM01.0). This procedure was modified slightly by using 1-gram soil samples instead of 0.5-gram soil samples in the initial sample preparation. In all, six aqueous samples were prepared: a sample, a duplicate sample, a sample spiked with 200 ug Cr, two blank samples, and a National Bureau of Standards (NBS) standard sample prepared using NBS certified Estuarine Sediment 1646. The aqueous samples were analyzed using, as a guide, the Method 7190 (Chromium, Atomic Absorption, Direct Aspiration), USEPA SW-846, November 1986. The 0.6 ppm, 1.0 ppm, 5.0 ppm, and 10.0 ppm experimental standards, used to spike the aqueous samples and to calibrate the atomic absorption instrument, were prepared from a certified standard stock solution with a concentration of 1,000 ppm Cr. A Varian Spectra AA 300/400 atomic absorption instrument was used for the analysis. Acetylene and air were the fuel and oxidant used, respectively. See Appendix D for details of the analytical methods described above.

FASP data are not equivalent to or a replacement for Contract Laboratory Program (CLP) data. FASP analysis was performed without benefit of many of the safeguards used by the CLP labs for maintaining data quality standards required by the EPA. These safeguards are sacrificed in order to provide project managers with fast, inexpensive analysis of environmental samples while the fieldwork is being done. FASP data are not intended for evidentiary use.

4.2.1 FASP Results

Sample FA-SS-01, which consisted of a moist, grey-colored clay, was determined to have a chromium concentration of 43 ug of chromium per gram of soil. The sample code, description, and rationale may be found in Table 1, and the location is shown on Figure 3 which represents an average of the results for the sample and the duplicate sample. The data for the NBS standard sample indicated a percent recovery of approximately 42 percent; this value was used to calculate the chromium concentration given above. These results are considered only approximately as the absorbance readings of the atomic absorption instrument tended to drift. This behavior was a consequence of

TABLE 1
SAMPLE CODES, DESCRIPTIONS, LOCATIONS, AND RATIONALE
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA

Sample Code	Description	Location	Rationale
FA-SS-01	Surface Soil	On site, near the west-central property boundary at 2" below grade	FASP screening sample to determine if chromium levels were elevated precluding its use as a background sample
TL-SS-01	Surface Soil	On site, near the west-central property boundary at 2" below grade	Background sample
TL-SS-02	Surface Soil	On site, at the northwestern edge of the old Trident Landfill cell at 4" below grade	Determine the presence or absence of contamination in surface soil
TL-SS-03	Surface Soil	On site, at the northeastern edge of the old Trident Landfill cell at 3" below grade	Determine the presence or absence of contamination in surface soil
TL-SS-04	Surface Soil	On site, at the central portion of the landfill in a drainage ditch at 4" below grade	Determine the presence or absence of contamination in surface soil
TL-SS-05	Surface Soil	On site, about 300' north and 100' west of the location for TL-SS-04, in another drainage ditch	Determine the presence or absence of contamination in surface soil
TL-SB-01	Subsurface Soil	On site, near the west-central property boundary at 4' below grade	Background sample
TL-SB-02	Subsurface Soil	On site, at the northwestern edge of the old Trident Landfill cell at 5' below grade	Determine the presence or absence of contaminants in subsurface soil
TL-SB-03	Subsurface Soil	On site, at the northeastern edge of the old Trident Landfill cell at 4.5' below grade	Determine the presence or absence of contamination in subsurface soil
TL-SB-04	Subsurface Soil	On site, at the central portion of the landfill in a drainage ditch at 3' below grade	Determine the presence or absence of contamination in subsurface soil
TL-SB-05	Subsurface Soil	On site, about 300' north and 100' west of the location for TL-SB-04, at 6' below grade	Determine the presence or absence of contamination in subsurface soil

TL - Trident North Landfill
SS - Surface Soil
SB - Subsurface Soil

SD - Sediment
PW - Groundwater, Private Well
MW - Groundwater, Monitoring Well

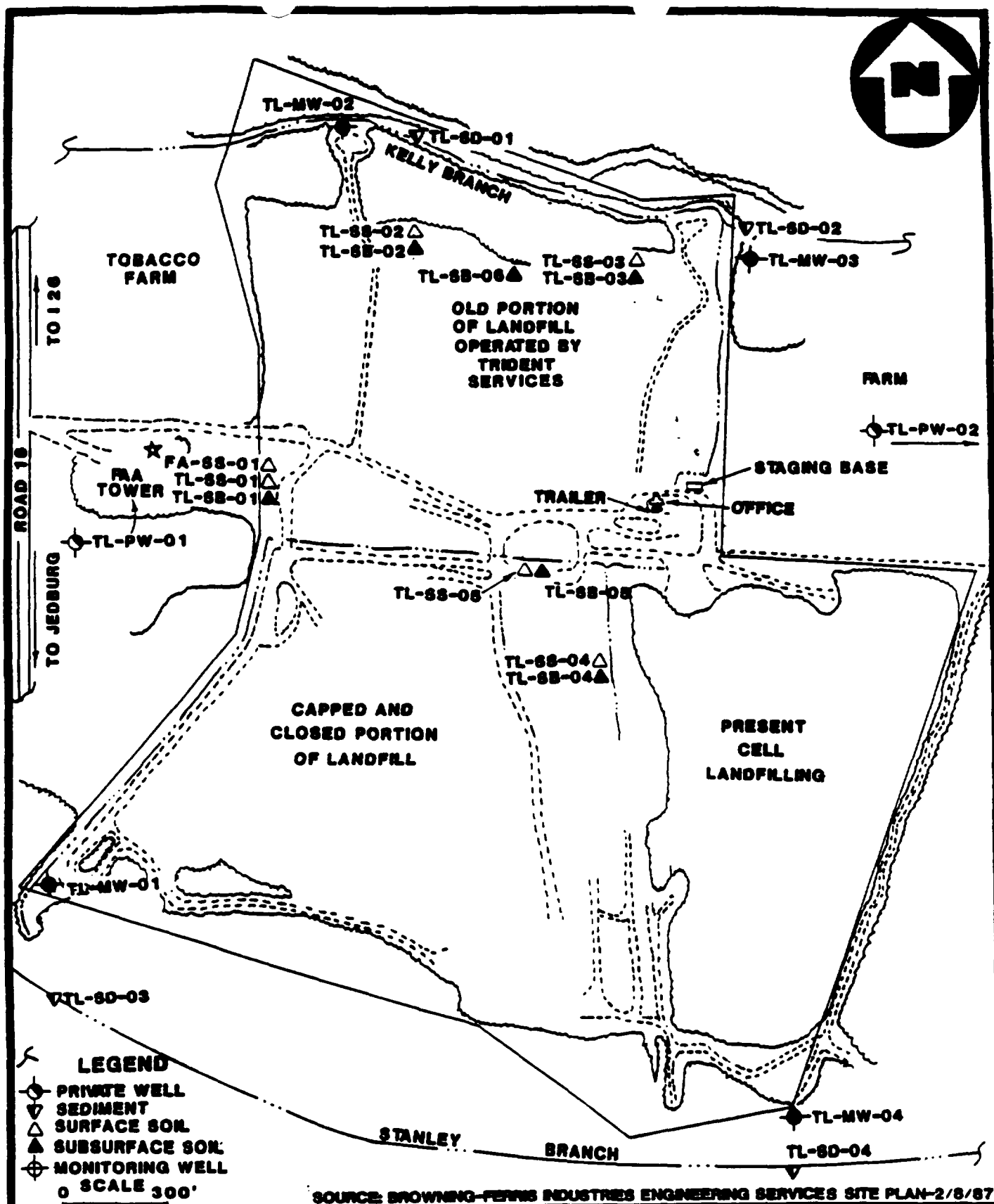
TABLE 1

**SAMPLE CODES, DESCRIPTIONS, LOCATIONS, AND RATIONALE
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA**

Sample Code	Description	Location	Rationale
TL-SB-06	Subsurface Soil	On site, along the north-central edge of the old Trident Landfill cell, at 6' below grade	Determine the presence or absence of contamination in subsurface soil
TL-SD-01	Sediment	Collected from Kelly Branch at the northwest portion of the facility, 3" below grade	Background sample
TL-SD-02	Sediment	Collected from Kelly Branch at the northeast portion of the facility, 4" below grade	Determine the presence or absence of contaminants in sediment
TL-SD-03	Sediment	Collected from Stanley Branch at the southwest portion of the facility, 4" below grade	Determine the presence or absence of contaminants in sediment
TL-SD-04	Sediment	Collected from Stanley Branch at the southeast portion of the facility, 4" below grade	Determine the presence or absence of contaminants in sediment
TL-PW-01	Private Well	Approximately 350' west of the landfill property at the Federal Aviation Administration (FAA) facility	Background, deep groundwater
TL-PW-02	Private Well	Approximately 500' east of the landfill property at the Scott residence	Determine the presence or absence of contaminants in deep groundwater
TL-MW-01	Monitoring Well	Existing monitoring well located in the southwest portion of the landfill	Determine the presence or absence of contaminants in shallow groundwater
TL-MW-02	Monitoring Well	Existing monitoring well located in the northwest portion of the landfill	Determine the presence or absence of contaminants in shallow groundwater
TL-MW-03	Monitoring Well	Existing monitoring well located in the northeast portion of the landfill	Determine the presence or absence of contaminants in shallow groundwater
TL-MW-04	Monitoring Well	Existing monitoring well located in the southeast portion of the landfill	Control, shallow groundwater

TL - Trident North Landfill
 SS - Surface Soil
 SB - Subsurface Soil

SD - Sediment
 PW - Groundwater, Private Well
 MW - Groundwater, Monitoring Well



**SAMPLE LOCATION MAP
TRIDENT NORTH LANDFILL
JEDBURG, BERKELEY / DORCHESTER COUNTIES,
SOUTH CAROLINA**

FIGURE 3



the fairly high sensitivity of the absorbance signal to flame stoichiometry. The laboratory records, atomic absorption instrument computer printout of the calibration and analysis results, and the calculations used to find the concentration of FA-SS-01 are given in Appendix E.

4.3 SAMPLE COLLECTION

During the week of September 16, 1990, NUS FIT 4 conducted the sampling activities that comprised a portion of the investigation at Trident North Landfill. The following sections describe and discuss the activities and related analytical results.

4.3.1 Sample Collection Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3 and 4 of the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986.

4.3.2 Split Samples

Split samples were offered to and collected by Browning-Ferris Industries Environmental Compliance Manager, Bill Crumley (Ref. 3, p. 7).

4.3.3 Description of Samples and Sample Locations

A total of 21 environmental samples were collected during the investigation. Five surface soil, six subsurface soil, four sediment, four monitoring well, and two private well samples were believed to be adequate in determining the source and character of hazardous wastes that may have been disposed of at the facility. Sample codes and descriptions may be found in Table 1, and locations are shown in Figure 3.

The sampling scheme used during the investigation was different than originally designed in the study plan. Based on geophysical data and information gathered during the onsite reconnaissance, most of the samples were collected around the oldest landfill cell used by Trident Services. Since groundwater contamination was first discovered in 1981, this scenario appeared correct. Only two monitoring well and sediment samples were collected at locations not surrounding the old cell. The two private well samples were collected approximately 1,000 feet east and west of the old cell.

Attempts were made to establish shallow, temporary wells on site, but either groundwater was not available at shallow enough depths, or landfilled debris was encountered. It was decided that existing shallow monitoring wells would be sufficient (Ref. 3, p. 14). Finally, the background surface and subsurface samples were collected near the west-central property boundary of the facility as opposed to the south-central portion.

4.3.4 Field Measurements

Field measurements, such as pH, conductivity, and temperature for the water samples collected during this investigation, may be found on Table 2.

4.4 SAMPLE ANALYSIS

4.4.1 Analytical Support and Methodology

All samples collected were analyzed under the Contract Laboratory Program (CLP) and analyzed for all parameters listed in the Target Compound List (TCL). Organic analysis of soil and water samples was performed by S-Cubed, San Diego, California. Inorganic analysis of soil and water was performed by Skinner and Sherman, Waltham, Massachusetts..

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Laboratory Operations and Quality Control Manual, United States Environmental Protection Agency, Region IV, Environmental Services Division, October 24, 1990; or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

4.4.2 Analytical Data Quality

All analytical data were subjected to a quality assurance review as described in the EPA Environmental Services Division laboratory data guidelines. In the tables, some of the concentrations of the organic and inorganic parameters have been flagged with a "J". This indicates that the qualitative analysis was acceptable, but the quantitative value has been estimated. A few other compounds are flagged with an "N", indicating that they were detected based on the presumptive evidence of their presence. This means that the compound was tentatively identified, and its detection cannot be used as positive identification to its presence. The complete analytical data sheets are provided in Appendix B.

TABLE 2

**FIELD MEASUREMENTS
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA**

Sample Code	pH	Conductivity	Temp (°F)
TL-PW-01	8.74	732	73
TL-PW-02	8.17	995	68
TL-MW-01	6.95	521	77
TL-MW-02	7.16	648	81
TL-MW-03	6.93	843	79
TL-MW-04	6.77	407	81

4.4.3 Presentation of Analytical Results

The following section discusses the analytical results of environmental samples collected at Trident North Landfill. Organic and inorganic analytical results are presented in Tables 3, 4, 5, 6, 7, 8. Only elevated concentrations of contaminants will be discussed. Elevated concentrations are those found to be either three times background levels or three times the minimum quantitation limit (MQL) of that contaminant in the background sample.

The source area believed to be responsible for hazardous releases was the old landfill cell operated by Trident Services. Several organic and inorganic contaminants were detected in the samples collected. Tetrachloroethene was detected in sample TL-SS-02 at 23 ug/kg or 11 times background. Subsurface soil samples TL-SB-02 and TL-SB-06 contained estimated 1,000 ug/kg of unidentified extractable compounds. Sediment samples TL-SD-01 and TL-SD-03, collected from the north and south property boundaries, were found to have estimated levels of unidentified extractable compounds at 1,000 and 3,000 ug/kg, respectively.

All surface and subsurface soil samples contained levels of chromium ranging from 2.6 to 18 mg/kg. The highest levels were found at the background location (TL-SS-01 at 15 mg/kg and TL-SB-01 at 18 mg/kg).

Groundwater flow is both north and south beneath the landfill (Ref. 1, p. 3). Originally, sample TL-MW-01 was picked as a background sample; however, TL-MW-04 is actually the furthest distance north or south of the old Trident cell. Private well samples collected east and west were too deep and below the confining unit to be used as background.

Based on this and the inability to establish a shallow temporary well either east or west of the facility, sample TL-MW-04 was thereby considered as the control sample. A control sample for a media such as groundwater differs from a background sample, in that it contains low levels of the same contaminants detected in the other samples collected. It is, therefore, used as a comparison for determining elevated levels in the other samples. There were no organic constituents detected in the monitoring wells; however, several inorganic contaminants were found. Chromium was detected at elevated levels in all monitoring well samples except for TL-MW-04 (TL-MW-02, 19 ug/l, 3 times MQL; TL-MW-03 at 22 ug/l, 3.5 times MQL; TL-MW-01 at 74 ug/l, 12 times MQL). Lead and vanadium concentrations were also elevated in sample TL-MW-01, at 74 ug/l, 18 times MQL and 64 ug/l, 12 times MQL, respectively. One contaminant was found in the private well samples collected. Lead was detected in sample TL-PW-02 at 17 ug/l, 4 times MQL.

TABLE 3

**SUMMARY OF ORGANIC ANALYTICAL RESULTS
SURFACE AND SUBSURFACE SOIL SAMPLES
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA**

PARAMETERS (ug/kg)	Trip Blank	Background	Old Trident Cell		Central Drainage Ditch		Background	Old Trident Cell		Central Drainage Ditch		Old Trident Cell
	TL-TB-01S	TL-SB-01	TL-SB-02	TL-SB-03	TL-SB-04	TL-SB-05	TL-SB-01	TL-SB-02	TL-SB-03	TL-SB-04	TL-SB-05	TL-SB-06
PURGEABLE COMPOUNDS												
TETRACHLOROETHENE	5U	2J	23	11	1J	6	5J	-	-	-	3J	6J
TOLUENE	5U	-	-	-	-	-	4J	-	-	-	-	-
ETHYL BENZENE	5U	-	-	-	-	-	7U	2J	-	-	-	-
EXTRACTABLE COMPOUNDS												
BENZYL BUTYL PHTHALATE	-	86J	-	-	-	-	860UJ	-	-	-	110J	-
UNIDENTIFIED COMPOUND(1)								1000J/1				1000J/1

- Material analyzed for but not detected above minimum quantitation limit (MQL).

J Estimated value.

U Material was analyzed for but not detected. The number given is the MQL.

(1) Tentatively identified compound. This compound is not on Target Compound List and is reported only as detected in individual samples; MQL not determined.

TABLE 4

**SUMMARY OF ORGANIC ANALYTICAL RESULTS
SEDIMENT SAMPLES
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTY, SOUTH CAROLINA**

PARAMETERS (ug/kg)	Trip Blank	Kelly Branch		Stanley Branch	
	TL-TB-01S	Background	TL-SD-02	Background	TL-SD-04
		TL-SD-01		TL-SD-03	
PURGEABLE COMPOUNDS					
TETRACHLOROETHENE	5U	-	-	-	-
TOLUENE	5U	-	-	-	-
ETHYL BENZENE	5U	-	-	-	-
EXTRACTABLE COMPOUNDS					
UNIDENTIFIED COMPOUND ⁽¹⁾		1000J/1		3000J/2	

- Material analyzed for but not detected above minimum quantitation limit (MQL).

J Estimated value.

U Material was analyzed for but not detected. The number given is the MQL.

(1) Tentatively identified compound. This compound is not on Target Compound List and is reported only as detected in individual samples; MQL not determined.

TABLE 5

**SUMMARY OF ORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTY, SOUTH CAROLINA**

PARAMETERS (ug/l)	Trip Blank	Off Site		On Site			
	TL-TB-01W	West of Facility	East of Facility	Southwest Corner	Northwest Corner	Northeast Corner	Control Sample Southeast Corner
		TL-PW-01	TL-PW-02	TL-MW-01	TL-MW-02	TL-MW-03	TL-MW-04
PURGEABLE COMPOUNDS							
CARBON DISULFIDE	5U	-	-	5U	2J	-	-
EXTRACTABLE COMPOUNDS							
BROMOHEXANE ⁽¹⁾		20JN		30JN	30JN	30JN	
CAPROLACTAM ⁽¹⁾				20JN	-	30JN	10JN
BUTYLIDENE BIS[(DIMETHYLETHYL)METHYLETHYL]PHENOL ⁽¹⁾				40JN	100JN	60JN	20JN
METHYLIDENE BIS[(DIMETHYLETHYL)METHYL]PHENOL ⁽¹⁾		20JN					

- Material analyzed for but not detected above minimum quantitation limit (MQL).

J Estimated value.

N Presumptive evidence of presence of material.

U Material was analyzed for but not detected. The number given is the MQL.

(1) Tentatively identified compound. This compound is not on Target Compound List and is reported only as detected in individual samples; MQL not determined.

TABLE 6

**SUMMARY OF INORGANIC ANALYTICAL RESULTS
SURFACE AND SUBSURFACE SOIL SAMPLES
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA**

PARAMETERS (mg/kg)	Background	Old Trident Cell		Central Drainage Ditch		Background	Old Trident Cell		Central Drainage Ditch		Old Triq Cell
	TL-S5-01	TL-S5-02	TL-S5-03	TL-S5-04	TL-S5-05	TL-SB-01	TL-SB-02	TL-SB-03	TL-SB-04	TL-SB-05	TL-SB-06
ALUMINUM	6800	7000	7500	8300	6000	14,000	7400	2200	2100	9000	1900
ARSENIC	2UJ	2.3J	2.4J	2.7J	2.6J	3UJ	2.6J	-	-	8.6J	-
BARIUM	12	16	23	19	9.3	41	17	11	-	38	14
CALCIUM	630J	470J	780J	420J	420J	1400J	-	880J	-	520J	640J
CHROMIUM	15	12	15	13	11	18	12	3.3	2.6	7.5	6.5
COBALT	-	-	-	-	-	5.4	-	-	-	2.9	-
IRON	15,000J	16,000J	14,000J	23,000J	12,000J	22,000J	11,000J	5300J	1500J	5700J	430J
LEAD	4.8	11	11	11	6.4	9.9	9.5	4.7	3.6	12	4.8
MAGNESIUM	180	250	380	230	180	1900	270	120	130	780	120
MANGANESE	5.2	4.9	7.6	4.4	4.1	39	13	-	-	21	-
POTASSIUM	260	260	270	220	230	1400	210	44	140	780	1
SELENIUM	0.57UR	-	-	2J	-	-	-	-	-	-	-
VANADIUM	30J	24J	22J	52J	25J	30J	23J	-	-	-	-
ZINC	4U	-	5.2	-	-	34	-	-	-	-	-
CYANIDE	1U	-	-	-	-	1.3U	-	-	-	-	-

- Material analyzed for but not detected above minimum quantitation limit (MQL).

J Estimated value.

U Material was analyzed for but not detected. The number given is the MQL.

R Quality Control indicates that data is unusable. Compound may or may not be present.

TABLE 7

**SUMMARY OF INORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA**

PARAMETERS (ug/l)	Preservative Blank	West of Facility	East of Facility	On Site			
	TL-PB-01	TL-PW-01	TL-PW-02	Southwest Corner	Northwest Corner	Northeast Corner	Control Sample Southeast Corner
				TL-MW-01	TL-MW-02	TL-MW-03	TL-MW-04
ALUMINUM	-	26U	-	18,000	3300	4000	1000
CALCIUM	-	2500	4100	230,000	83,000	140,000	53,000
CHROMIUM	-	6U	-	74	19	22	6U
COBALT	-	5U	-	8	-	-	4U
IRON	-	-	-	16,000	3700	4700	2900
LEAD	-	4U	17	74	8	5	4U
MAGNESIUM	-	1300	2800	12,000	7700	10,000	8000
MANGANESE	-	2U	-	200	83	150	150
POTASSIUM	-	6700	8800	3400	1800	3700	2200
SODIUM	-	150,000	170,000	25,000	19,000	38,000	35,000
VANADIUM	-	3U	-	64	-	-	5U
CYANIDE	-	10U	-	-	-	-	10U

- Material analyzed for but not detected above minimum quantitation limit (MQL)
U Material was analyzed for but not detected. The number given is the MQL.

TABLE 8

**SUMMARY OF INORGANIC ANALYTICAL RESULTS
SEDIMENT SAMPLES
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA**

PARAMETERS (mg/kg)	Kelley Branch		Stanley Branch Off Site	
	Background	TL-SD-02	Background	TL-SD-04
	TL-SD-01		TL-SD-03	
ALUMINUM	7000	5900	11,000	6300
BARIUM	25	17	30	20
CALCIUM	1300J	820J	1200J	1700J
CHROMIUM	21	9.1	15	9.7
COBALT	2U	-	1.8	-
IRON	12,000J	21,000J	15,000J	18,000J
LEAD	13	7	9.9	8.3
MAGNESIUM	380	170	390	430
MANGANESE	15	4.7	18	8.3
POTASSIUM	310	93	380	260
VANADIUM	23J	33J	29J	23J
CYANIDE	1.3U	-	-	-

- Material analyzed for but not detected above minimum quantitation limit (MQL).
- J Estimated value.
- U Material was analyzed for but not detected. The number given is the MQL.

5.0 SUMMARY

The groundwater pathway is of primary concern. Monitoring well samples collected from the shallow aquifer revealed elevated levels of chromium, lead, and vanadium. A private well sampled east of the facility was found to contain elevated levels of lead. The well is about 440 feet deep, which is below the 150-foot-thick, confining Cooper Formation.

The surface water pathway is of concern; however, the intermittent Stanley and Kelly branches enter Cypress Swamp approximately 2 stream miles from the the facility. This is considered a long migration distance. Only estimated levels of unidentified extractable organics were detected in sediments collected from the tributaries.


Soil exposure is of lesser concern, since the landfill is either fenced or access is difficult. Tetrachloroethene was found at elevated levels in a surface soil sample, and chromium was found in all soil samples collected.

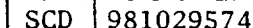
Based on the analysis of possible migration pathways, the results of the sampling investigation, and the information obtained from the references, it is recommended that Phase I of a Listing Site Inspection be initiated at Trident North Landfill.

REFERENCES

1. David W. Nix, Bureau of Solid and Hazardous Waste Management, South Carolina Department of Health and Environmental Control, Preliminary Assessment Update Report Trident North Landfill SCD900558233 Berkeley/Dorchester County South Carolina, prepared for EPA (March 10, 1989).
2. Allen Walker, Landfill Manager, Browning-Ferris Industries, telephone conversation with Mitch Cohen, NUS Corporation, November 9, 1990. Subject: Specific types of industrial waste disposed of at Trident North Landfill.
3. NUS Corporation Field Logbook No. F4-2535 for Trident North Landfill, TDD No. F4-9007-35. Documentation of field activities conducted during screening site inspection, September 16, 17, 18, 1990.
4. Pat Turner, Manager, Freedom of Information Services, South Carolina Department of Health and Environmental Control, letter and attachment to Mitch Cohen, NUS Corporation, December 21, 1990. Subject: Recent groundwater monitoring results.
5. NUS Corporation Field Logbook No. F4-2446 for Trident North Landfill, TDD No. F4-9007-35. Documentation of offsite reconnaissance, July 25, 1990.
6. U.S. Environmental Protection Agency, Graphical Exposure Modeling System (GEMS) Data Base, compiled from U.S. Bureau of the Census data (1980).
7. Oscar E. Meinger, The Occurrence of Groundwater in the United States, Geological Water-Supply Paper 489 (Washington, D.c.: GPO, 1923).
8. Linda Aller, et al., DRASTIC: A Standardized System for Evaluating Ground Water Pollution Potential Using Hydrogeologic Settings, (Ada, Oklahoma: EPA, 1987).
9. A. Drennan Park, The Groundwater Resources of Charleston, Berkeley, and Dorchester Counties, South Carolina, Water Resources Commission Report Number 139 (State of South Carolina, 1985).

10. U.S. Department of Commerce, Climatic Atlas of the United States (Washington, D.C.: GPO, June 1968) Reprint: 1983 National Oceanic and Atmospheric Administration.
11. U.S. Department of Commerce, Rainfall Frequency Atlas of the United States, Technical Paper No. 40 (Washington, D.C.: GPO 1961).
12. Curtis Peebler, South Carolina Wildlife and Marine Resources Department, telephone conversation with Mitch Cohen, NUS Corporation, December 6, 1990. Subject: Fishing and boating in Cypress Swamp.
13. Kathy Boyle, South Carolina Wildlife and Marine Resources Department, telephone conversation with Mitch Cohen, NUS Corporation, December 6, 1990. Subject: Endangered plant species along the surface water pathway.
14. R. Allan Freeze and John A. Cherry, Groundwater (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1979).
15. Field Technician, Tri-County Well Drilling, telephone conversation with Mitch Cohen, NUS Corporation, December 6, 1990. Subject: Well depths in the Jedburg, South Carolina, area.

 POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 1 - SITE INFORMATION AND ASSESSMENT		I. IDENTIFICATION 01 STATE | 02 SITE NUMBER SCD | 981028574	
II. SITE NAME AND LOCATION			
01 SITE NAME (Legal, common, or descriptive name of site)		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER	
Browning Ferris Industries		One (1) mile Southwest of I-26 on S. d. 16	
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY
Summerville	SC	29438	Dorchester
09 COORDINATES		07 COUNTY CODE	08 CONG DIST
LATITUDE 3 300 4'0 9"1 N		035	1
LONGITUDE -8 1° 12'46.1W			
10 DIRECTIONS TO SITE (Starting from nearest public road) From the intersection of State Rd. 16 and Interstate 26 (Jedburg exit) turn left (Southwest) onto S-16-58 and proceed for approximately 1.1 miles Southwest. Landfill is located on left side between Dorchester and Berkeley Counties.			
III. RESPONSIBLE PARTIES			
01 OWNER (if known)		02 STREET (Business, mailing, residential)	
Browning Ferris Industries		1934 Summerville Avenue	
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Charleston	SC	29405	(803) 554-4994
07 OPERATOR (if known and different from owner)		08 STREET (Business, mailing, residential)	
Same as owner			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			()
13 TYPE OF OWNERSHIP (Check one)			
<input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL: _____ (Agency name) <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER: _____ (Specify) <input type="checkbox"/> G. UNKNOWN			
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)			
<input type="checkbox"/> A. RCRA 3001 DATE RECEIVED: ____/____/____ <input type="checkbox"/> B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ____/____/____ <input checked="" type="checkbox"/> C. NONE			
IV. CHARACTERIZATION OF POTENTIAL HAZARD			
01 ON SITE INSPECTION		BY (Check all that apply)	
<input checked="" type="checkbox"/> YES DATE <u>11/12/0</u> <input type="checkbox"/> NO MONTH DAY YEAR		<input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input checked="" type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify)	
John Ohlandt		CONTRACTOR NAME(S): _____	
02 SITE STATUS (Check one)		03 YEARS OF OPERATION	
<input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN		BEGINNING YEAR <u>1979</u> | <u>present</u> ENDING YEAR <input type="checkbox"/> UNKNOWN	
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED Substances known to be disposed at this permitted landfill consist of lumber, concrete metal band, metal drums, asbestos, tires and insulation. No known hazardous substances are believed to be disposed on site.			
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION Shallow groundwater at the site is not used for drinking water purposes, but is likely to discharge to the local streams that border the site.			
V. PRIORITY ASSESSMENT			
01 PRIORITY FOR INSPECTION (Check one - if high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)			
<input type="checkbox"/> A. HIGH (Inspection required promptly) <input type="checkbox"/> B. MEDIUM (Inspection required) <input checked="" type="checkbox"/> C. LOW (Inspect on time available basis) <input type="checkbox"/> D. NONE (No further action needed, complete current disposition form)			
VI. INFORMATION AVAILABLE FROM			
01 CONTACT		02 OF (Agency Organization)	
John Cresswell		SCDHEC-Bureau of Solid & Haz. Waste	
04 PERSON RESPONSIBLE FOR ASSESSMENT		05 AGENCY	06 ORGANIZATION
Craig Dukes		SCDHEC	BSHWM
		07 TELEPHONE NUMBER	08 DATE
		803 734-5200	08, 25, 87 MONTH DAY YEAR



<input checked="" type="checkbox"/> A. TOXIC	<input type="checkbox"/> E. SOLUBLE	<input type="checkbox"/> I. HIGHLY VOLATILE
<input type="checkbox"/> B. CORROSIVE	<input type="checkbox"/> F. INFECTIOUS	<input type="checkbox"/> J. EXPLOSIVE
<input type="checkbox"/> C. RADIOACTIVE	<input type="checkbox"/> G. FLAMMABLE	<input type="checkbox"/> K. REACTIVE
<input type="checkbox"/> D. PERSISTENT	<input type="checkbox"/> H. IGNITABLE	<input type="checkbox"/> L. INCOMPATIBLE
		<input type="checkbox"/> M. NOT APPLICABLE



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE | 02 SITE NUMBER
SCD | 981028574

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 47,500
SCDHEC's Groundwater Protection Division has reviewed this facility's first quarter 1987 groundwater monitoring report. Total/dissolved organic carbon values were elevated. Potential contamination of the shallow aquifer system exist, however, the deeper groundwater is unlikely to be affected due to the impermeability of the Cooper Marl Formation.

02 ☐ OBSERVED (DATE: Jan, '87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potential for contamination of the nearby creeks of Kelly and Stanley Branch exist since the site is located on a rise and shallow groundwater could be discharging leachate contaminant into the local streams.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No contamination of the air has been observed or known to exist at the site by SCDHEC personnel who have conducted numerous site inspections at the facility.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No fire or explosive conditions have ever been known to have occurred at this landfill to date. All refuse is adequately covered daily to prevent any fire potential.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Direct contact with the waste at the site is unlikely because all waste disposed at the landfill is covered daily and surrounded by a chain link fence to limit access to the casual pedestrian.

01 ☒ F. CONTAMINATION OF SOIL 1.0 110
03 AREA POTENTIALLY AFFECTED: (acres)
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potential for contamination of the local soils at the site exist due to the possibility that leachate may migrate through the clays and sandy soils at the site.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Drinking water contamination within a three (3) mile radius of the site is unlikely since all residents rely on deep groundwater wells whose depths exceed 300 feet or more. All known wells are screened below the Cooper Marl Formation which is hydrologically impermeable.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No worker exposure injury has been observed or reported at this landfill to date by SCDHEC's Trident District Consultant, Mr. John Ohlandt.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No population exposure or injury has occurred at this landfill site since its' original permit date in 1979.



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
SCD 981028574

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No damage to flora or any vegetative cover has been reported or observed by SCDHEC Trident District Consultant, Mr. John Ohlandt.

01 ☐ K. DAMAGE TO FAUNA

04 NARRATIVE DESCRIPTION (Include name(s) of species)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No damage to fauna has been determined or observed as a result of landfilling activities at this site.

01 ☐ L. CONTAMINATION OF FOOD CHAIN

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No contamination of the food chain is known to have occurred at this permitted Sanitary Landfill.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES

(Spills/runoff/standing liquids/leaking drums)

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: unknown 04 NARRATIVE DESCRIPTION

Potential unstable containment of wastes exist because the waste types at the site are buried with no liner containment systems.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No damage to any offsite property has been determined to exist at this time according to Mr. John Ohlandt of SCDHEC's Trident District.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No contamination of any wastewater treatment plants, sewers, or storm drains have been reported or observed to be affected by operation of this solid waste landfill.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No illegal or unauthorized dumping of hazardous waste has occurred at this permitted sanitary landfill. Waste types disposed on site consist of non-hazardous industrial waste.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

Groundwater monitoring analysis for the first quarter of 1987 has indicated slightly elevated levels of Total Organic Carbon.

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

Continued groundwater monitoring at the landfill should be undertaken to confirm the presence of volatile organic compounds within the shallow groundwater.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state lab sample analysis reports)

SCDHEC Groundwater Protection Division Files - BFI Landfill - Berkeley County
SCDHEC Solid & Hazardous Waste Files - BFI Landfill - Berkeley County
SCDHEC Trident District Solid Waste Consultant - John D. Ohlandt

6

SOLID WASTE MANAGEMENT SYSTEM PERMIT RECORD

Name of Establishment Trident Sanitation Services, Inc.
Address 1934 Summerville Avenue, Charleston Heights, SC 29405
Supervisor Mr. Willis Austin Phone 554-4994
Permit to Operate an Industrial Solid Waste Disposal Facility
Date Issued August 30, 1979 Permit No. IWP-163
Approved By Hartsill W. Truesdale, P.E., Director, Solid Waste Management Division

South Carolina Department Of Health And Environmental Control



**Solid Waste Management Division
Columbia, South Carolina**

Permit

Trident Sanitation Services, Inc. is hereby issued a permit
to operate a n Industrial Solid Waste Disposal Facility
located Jedburg, South Carolina, in accordance
with State laws, rules and regulations of the South Carolina Department of Health and
Environmental Control and the following conditions:

1. Facility shall be operated in accordance with engineering plans and report.
2. Wastes shall be limited to lumber, concrete, metal bands, cardboard, shingles,
plastics, asbestos, insulation, tires, metal drums, latex and filler mud
from U.S. Plywood Corp.

PAGE 1 of 2

Dated this 30th day of August, 1979

Permit No. IWP-163

Malcolm U. Dantzler, M.D.
Malcolm U. Dantzler, Commissioner

Hartsill W. Truesdale
Hartsill W. Truesdale, P.E., Director

THIS CERTIFICATE IS NON TRANSFERABLE AND IS THE PROPERTY OF THE SOLID WASTE MANAGEMENT DIVISION AND MUST BE
SURRENDERED ON DEMAND. KEEP POSTED AT ALL TIMES IN A CONSPICUOUS PLACE ON THE PREMISES.

Mr. Willis Austin
Page Two
August 30, 1979

3. This permit is subject to review one (1) year from date of issue.
4. Daily cover of a minimum of six (6) inches of soil must be provided to ensure adequate fire control.



GROUND WATER SERVICES

STATISTICAL ANALYSIS AND ANNUAL REPORT OF GROUND WATER

**FIRST SEMI-ANNUAL/SECOND YEAR CLOSURE (AUGUST 1993)
SECOND SEMI-ANNUAL/SECOND YEAR CLOSURE (FEBRUARY 1994)**

**JEDBURG LANDFILL
CHARLESTON, SOUTH CAROLINA**

APRIL, 1994



BROWNING-FERRIS INDUSTRIES

INTEROFFICE CORRESPONDENCE

TO: TOM ENGELKEN
CECOS - LIVINGSTON

FROM: MIKE MCGOVERN *MM*
GROUND WATER SERVICES

DATE: APRIL 13, 1994

SUBJECT: SECOND YEAR CLOSURE ANNUAL STATISTICAL ANALYSIS
OF GROUND WATER
JEDBURG LANDFILL
SOUTHERN REGION
PROJECT NO. 232.900

DISCUSSION

As previously proposed and accepted an intra-well statistical comparison was performed for the Jedburg landfill with six (6) monitoring wells designated W-1A thru W-6 for the second year of closure. The analysis included all data available for each parameter for each of the semi-annual sampling event. The five (5) parameters included in the analysis were chloride, pH, specific conductance, sulfate and total organic carbon (TOC). Each parameter, by well, were described statistically and analyzed for normal distribution tendencies. A tolerance interval was then calculated based on all previous data from each well and compared to the most recent sampling event. A correlation statistic (Kendall-Tau) was calculated and used as a non-parametric trending tendency analysis on those parameters which were not determined to be normally distributed or failed the tolerance test. All statistics used are recommended by either the Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities, EPA, April 1989 and/or Methods for Determining Compliance with Ground Water Quality Regulations at Waste Disposal Facilities, University of Wisconsin, January 1989.

FIRST SEMI-ANNUAL/SECOND YEAR CLOSURE (AUGUST 1993) RESULTS

APPENDIX A

The data for each well is summarized by well by parameter (Section 1). All results for all tested parameters were less than the calculated tolerance intervals (Section 2). There were thirteen (13) instances of non-normally distributed data, pH at wells W-1A, W-3A, Sulfate at W-1A, 2A, 3A 4A and 5A, Conductance at well W-6A and TOC at W-1A, 2A, 3A, 4A and 5A (Section 3). The non-normal data sets were used to calculate non-parametric Kendall-Tau statistics. None of the data indicated significant upward trend (Section 4). The pH value in W-3A did indicate significant downward trend, with a quarterly result of 6.82. Low level organics were detected in well W-6 (Section 4, Appendix C). The organics were 1,1 Dichlorethane and Dichlorofluoromethane at 8.4 and 2.9 ug/l respectively.

SECOND SEMI-ANNUAL/SECOND YEAR OF CLOSURE (FEBRUARY 1994) RESULTS

APPENDIX B

The results for TOC at wells W-3 and W-5A of 64.1 mg/l and 45.2 mg/l are suspect. Neither is indicative of a significant trend or the highest values recorded in the wells histories; but they are an order of magnitude higher than the previous quarters results of 6.54 and 8.66 mg/l, respectively. The pH value in well W-3A is still indicating significant downward trend but this is a result of high pH values in the wells history. The current result is 7.22. Sulfate failed the tolerance test in well W-6. It's concentration was 21.4 mg/l. The number of non-detections (40%) and small sample size indicates that the trend analysis would be more appropriate. The trend analysis indicated a non-significant trend for sulfate in well W-6. Sulfate in W-4A was not run with the trend analysis, although non-normality distributed, because the current result is less than detection limit. Low level organics were detected in well W-6 (Section 4, Appendix C). The organics were 1,1 Dichlorethane and Dichlorofluoromethane at 5.7 and 2.3 ug/l respectively.

CONCLUSIONS

Based on documented methodologies for the statistical analysis of ground water, critical values were established for those parameters meeting necessary pre-conditions (i.e. normality). These critical values were established with data from July 1986 to August 1991. Results from two successive sampling events, August 1993 and February 1994 were compared to these critical values and were found to be within the acceptable limits. Where normality was not achievable or non-detections were > 15% and tolerance intervals exceeded a trend analysis was performed. Persistent low level organics continue to appear in well W-6.

MCM/smv

cc: John Oneacre/File
Mark Allendorf

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Kendall-Tau Trend Analysis	Appendix B, Section 4
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BROWNING FERRIS INDUSTRIES, INC.
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WELL NO: 3700W1A JEDBURG W-1A

PAGE 1

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
***** CONVENTIONALS *****						
CHLORIDE MG/L	13.60000	9.81000	.	9.90000	.	8.80000
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	.	.	.	< 0.05000	.	< 0.05000
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	< 5.00000	< 5.00000	.	5.39000	.	< 5.00000
TEMPERATURE C	18.20000	24.30000	19.40000	22.40000	20.40000	21.90000
TEMPERATURE C	.	.	.	18.50000	22.00000	20.50000
***** ELEVATIONS/DEPTHS *****						
DEPTH TO WATER FT	15.91000	.	.	14.59000	7.48000	15.31000
ELEV. GROUND WATER SURFACE FT	.	18.24000	14.45000	42.49000	42.78000	41.77000
***** INDICATORS *****						
PH SU	6.12000	6.85000	5.82000	6.26000	6.13000	6.62000
PH, LAB SU	.	.	.	6.46000	6.37000	5.60000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	159.00000	198.00000	148.00000	141.00000	163.00000	100.00000
TOC MG/L	3.48000	17.80000	.	1.85000	3.00000	8.00000
***** METALS *****						
ANTIMONY MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.
NICKEL MG/L	.	.	.	.	.	.
SELENIUM MG/L	.	.	.	.	.	.
THALLIUM MG/L	.	.	.	.	.	.
ZINC MG/L	.	.	.	.	.	.
***** METALS DISSOLVED *****						
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.
SELENIUM MG/L	.	.	.	.	.	.
SILVER MG/L	.	.	.	.	.	.
***** METALS TOTAL *****						

U = UNDETECTED

A = --- (APPROXIMATE)

> = GREATER THAN

< = QUALIFIED BELOW MDL

N = NOT REPORTED

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
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WELL NO: 3700W1A JEDBURG W-1A

PAGE 1.1

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	08/23/90 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
CHLORIDE MG/L	12.80000	.	.	12.30000	.	.
CYANIDE MG/L	< 0.01000	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	< 0.05000	.	.	.	.	.
NITRITE AND NITRATE MG/L	.	.	.	0.07000	.	.
PHENOLS MG/L	< 0.01000	.	.	.	.	.
SULFATE MG/L	< 5.00000	.	.	3.68000	.	.
TEMPERATURE C	22.80000	19.20000	25.40000	.	19.00000	20.00000
TEMPERATURE C	19.00000	.	20.60000	.	23.00000	22.00000
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	17.14000	17.82000	14.23000	.	15.96000	20.29000
ELEV. GROUND WATER SURFACE FT	39.94000	39.26000	42.85000	.	41.12000	36.79000
***** INDICATORS *****	*	*	*	*	*	*
PH SU	6.16000	6.09000	6.52000	.	6.32000	6.55000
PH LAB SU	6.47000	.	6.47000	.	6.62000	6.70000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	191.00000	187.00000	179.00000	.	133.00000	188.00000
TOC MG/L	4.00000	.	16.00000	.	32.00000	18.00000
***** METALS *****	*	*	*	*	*	*
ANTIMONY MG/L	< 0.00500	.	.	.	.	.
COPPER MG/L	< 0.03000	.	.	.	.	.
LEAD MG/L	< 0.00500	.	.	.	.	.
MERCURY MG/L	< 0.00050	.	.	.	.	.
NICKEL MG/L	< 0.03000	.	.	.	.	.
SELENIUM MG/L	< 0.00500	.	.	.	.	.
THALLIUM MG/L	< 0.00500	.	.	.	.	.
ZINC MG/L	< 0.03000	.	.	.	.	.
***** METALS DISSOLVED *****	*	*	*	*	*	*
ARSENIC MG/L	0.00915	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	< 0.01000	.	.	.	.	.
CADMIUM MG/L	< 0.01000	.	.	.	.	.
CHROMIUM MG/L	< 0.03000	.	0.08160	.	.	.
LEAD MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.
SELENIUM MG/L	.	.	.	.	.	.
SILVER MG/L	< 0.03000	.	.	.	.	.
***** METALS TOTAL *****	*	*	*	*	*	*

1. NO. 3700W1A
2. JEDBURG W-1A
3. UNDETERMINATE AND NO. 1 FOR SPECTRA AVAILABLE

4. DEPT. 110
5. APPROXIMATE
6. IDENTIFIED BELOW

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PAGE 1.2

DATE SAMPLED	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y	08/27/87 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
CHLORIDE MG/L	13.20000	.	12.00000	.	17.00000	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	0.40000	.	1.00000	.
NITRATE MG/L	< 0.05000	.	< 0.10000	.	< 0.10000	.
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	5.00000	.	< 5.00000	.	< 5.00000	.
TEMPERATURE C	25.00000	24.00000	20.00000	21.00000	18.00000	22.00000
TEMPERATURE C	17.00000	27.00000	22.00000	15.00000	25.00000	25.00000
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	15.75000	18.26000	16.77000	18.53000	16.52000	18.63000
ELEV. GROUND WATER SURFACE FT	41.33000	38.82000	40.31000	38.55000	40.56000	38.45000
***** INDICATORS *****	*	*	*	*	*	*
PH SU	6.31000	6.54000	6.09000	6.16000	6.16000	5.75000
PH, LAB SU	6.43000	6.83000	6.33000	6.69000	6.18000	6.58000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	225.00000
SPECIFIC CONDUCTANCE UMHOS/CM	145.00000	236.00000	232.00000	186.00000	236.00000	262.00000
TOC MG/L	4.00000	9.00000	13.80000	6.07000	25.50000	1.89000
***** METALS *****	*	*	*	*	*	*
ANTIMONY MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.
NICKEL MG/L	.	.	.	.	.	.
SELENIUM MG/L	.	.	.	.	.	.
THALLIUM MG/L	.	.	.	.	.	.
ZINC MG/L	.	.	.	.	.	.
***** METALS DISSOLVED *****	*	*	*	*	*	*
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.
SELENIUM MG/L	.	.	.	.	.	.
SILVER MG/L	.	.	.	.	.	.
***** METALS TOTAL *****	*	*	*	*	*	*

1 - NOT REPORTED
2 - UNDETERMINATE AND/OR NOT TESTED
3 - DATA AVAILABLE

GREATER THAN
QUANTIFIED BELOW

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W1A JEDBURG W-1A

PAGE 1.3

DATE SAMPLED	02/11/87 Y	09/12/86 Y	07/30/86 Y	01/02/86 Y	Y	Y
***** CONVENTIONALS *****	*	*	*	*		
CHLORIDE MG/L	13.00000	10.70000	7.40000	10.00000		
CYANIDE MG/L	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	< 37.40000	9.20000	.	< 43.70000		
FLUORIDE MG/L	< 1.00000	1.10000	< 1.00000	1.00000		
NITRATE MG/L	< 1.00000	< 1.00000	< 1.00000	< 1.00000		
NITRITE AND NITRATE MG/L	.	.	.	.
PHENOLS MG/L	.	.	.	.
SULFATE MG/L	6.80000	115.00000	14.40000	50.00000		
TEMPERATURE C	19.00000	22.00000	22.00000	N 0.00000		
TEMPERATURE C	25.00000	25.00000	25.00000	N 0.00000		
***** ELEVATIONS/DEPTHS *****	*	*	*	*		
DEPTH TO WATER FT	16.50000	18.74000	19.13000	17.55000		
ELEV. GROUND WATER SURFACE FT	40.58000	38.34000	37.95000	39.53000		
***** INDICATORS *****	*	*	*	*		
PH SU	6.22000	7.49000	7.56000	6.87000		
PH. LAB SU	6.50000	6.16000	6.78000	6.17000		
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	300.00000	N 0.00000		
SPECIFIC CONDUCTANCE UMHOS/CM	387.00000	342.00000	321.00000	277.00000		
TOC MG/L	39.50000	6.46000	11.40000	N 0.00000		
***** METALS *****	*	*	*	*		
ANTIMONY MG/L	.	.	.	.
COPPER MG/L	.	.	.	.
LEAD MG/L	.	.	.	.
MERCURY MG/L	.	.	.	.
NICKEL MG/L	.	.	.	.
SELENIUM MG/L	.	.	.	.
THALLIUM MG/L	.	.	.	.
ZINC MG/L	.	.	.	.
***** METALS DISSOLVED *****	*	*	*	*		
ARSENIC MG/L	< 0.05000	< 0.05000	.	.		
BARIUM MG/L	0.14000	0.11000	.	.		
BERYLLIUM MG/L	.	.	.	.
CADMIUM MG/L	< 0.01000	< 0.01000	.	.		
CHROMIUM MG/L	< 0.05000	< 0.05000	.	.		
LEAD MG/L	< 0.05000	< 0.05000	.	.		
MERCURY MG/L	< 0.00200	< 0.00200	.	.		
SELENIUM MG/L	< 0.01000	< 0.01000	.	.		
SILVER MG/L	< 0.05000	< 0.05000	.	.		
***** METALS TOTAL *****	*	*	*	*		

NOT REPORTED
UNDETERMINATE AND OF NO REF. SPECTRA AVAILABLE

GREATER THAN
QUANTIFIED BELOW MG/L

WELL NO: 3700W1A JEDBURG W-1A

PAGE 2

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L
BARIUM, TOTAL MG/L
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L
COPPER, TOTAL MG/L
LEAD, TOTAL MG/L
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L
THALLIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED
 I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE
 U = UNDETECTED
 A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN
 J = QUANTIFIED BELOW MDL

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	08/23/90 Y
ANTIMONY, TOTAL MG/L	< 0.00500	.	.	.	.	.
ARSENIC, TOTAL MG/L	0.01410	.	.	.	.	.
BARIUM, TOTAL MG/L	.	.	.	.	.	.
BERYLLIUM, TOTAL MG/L	< 0.01000	.	.	.	.	.
CADMIUM, TOTAL MG/L	< 0.01000	.	.	.	.	.
CHROMIUM, TOTAL MG/L	< 0.03000	.	< 0.03000	.	.	.
COPPER, TOTAL MG/L	< 0.03000	.	.	.	.	.
LEAD, TOTAL MG/L	< 0.00500	.	.	.	.	.
MERCURY, TOTAL MG/L	< 0.00050	.	.	.	.	.
NICKEL, TOTAL MG/L	< 0.03000	.	.	.	.	.
SELENIUM, TOTAL MG/L	< 0.00500	.	.	.	.	.
SILVER, TOTAL MG/L	< 0.03000	.	.	.	.	.
THALLIUM, TOTAL MG/L	< 0.00500	.	.	.	.	.
ZINC, TOTAL MG/L	0.04880	.	.	.	.	.
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED

U = UNDETECTED

> = GREATER THAN < = LESS THAN

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

A = +/- (APPROXIMATE)

J = QUANTIFIED BELOW MDL

WELL NO: 3700W1A JEDBURG W-1A

PAGE 2.2

DATE SAMPLED	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y	08/27/87 Y
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L
BARIUM, TOTAL MG/L
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L
COPPER, TOTAL MG/L
LEAD, TOTAL MG/L
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L
THALLIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED
 I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE
 U = UNDETECTED
 A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN
 J = QUANTIFIED BELOW MDL

DATE SAMPLED	02/11/87 Y	09/12/86 Y	07/30/86 Y	01/02/86 Y	Y	Y
ANTIMONY, TOTAL MG/L						
ARSENIC, TOTAL MG/L	< 0.05000	< 0.05000	< 0.05000	< 0.05000		
BARIUM, TOTAL MG/L	< 0.10000	< 0.10000	< 0.10000	< 0.10000		
BERYLLIUM, TOTAL MG/L						
CADMIUM, TOTAL MG/L	< 0.01000	< 0.01000	< 0.01000	< 0.01000		
CHROMIUM, TOTAL MG/L	< 0.05000	< 0.05000	< 0.05000	< 0.05000		
COPPER, TOTAL MG/L						
LEAD, TOTAL MG/L	< 0.05000	< 0.05000	< 0.05000	< 0.05000		
MERCURY, TOTAL MG/L	< 0.00200	< 0.00200	< 0.00200	< 0.00200		
NICKEL, TOTAL MG/L						
SELENIUM, TOTAL MG/L	< 0.01000	< 0.01000	< 0.01000	< 0.01000		
SILVER, TOTAL MG/L	< 0.05000	< 0.05000	< 0.05000	< 0.05000		
THALLIUM, TOTAL MG/L						
ZINC, TOTAL MG/L						
***** ORGANIC ACIDS *****	*	*	*	*		
***** ORGANIC BASE *****	*	*	*	*		
***** ORGANIC OTHER *****	*	*	*	*		
***** VOLATILE ORGANICS *****	*	*	*	*		
***** RADIOACTIVITY *****	*	*	*	*		

N = NOT REPORTED

U = UNDETECTED

> = GREATER THAN < = LESS THAN

A = +/- (APPROXIMATE)

J = QUANTIFIED BELOW MDL

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

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PAGE 1

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	13.50000	18.70000	.	15.50000	.	13.40000
CYANIDE MG/L	.	.	.	.	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	.	.	.	< 0.05000	.	< 0.05000
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	10.60000	< 5.00000	.	< 5.00000	.	< 5.00000
TEMPERATURE C	15.80000	19.50000	22.50000	22.50000	20.00000	22.40000
TEMPERATURE C	.	.	.	15.90000	20.00000	17.60000
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	3.59000	.	.	3.45000	3.65000	3.32000
ELEV. GROUND WATER SURFACE FT	.	8.87000	3.60000	36.89000	36.69000	37.02000
***** INDICATORS *****	*	*	*	*	*	*
PH SU	7.73000	6.85000	7.20000	7.15000	7.43000	6.94000
PH, LAB SU	.	.	.	7.24000	7.40000	7.40000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	313.00000	476.00000	439.00000	382.00000	265.00000	229.00000
TOC MG/L	11.40000	6.36000	.	3.55000	16.00000	5.00000
***** METALS *****	*	*	*	*	*	*
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

1. NOT REPORTED
2. UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

= GREATER THAN
= QUANTIFIED BELOW MDL

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PAGE 1.1

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
ALKALINITY MG/L	.	.	.	.	.	274.00000
BICARBONATE MG/L	.	.	.	.	.	274.00000
CARBONATE MG/L	.	.	.	.	.	< 1.00000
CHLORIDE MG/L	18.20000	.	.	13.50000	.	16.70000
CYANIDE MG/L	< 0.01000	.	.	.	.	< 0.01000
CYANIDE MG/L	.	.	.	.	.	U 10.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	< 0.05000	.	.	.	.	< 0.05000
NITRITE AND NITRATE MG/L	.	.	.	< 0.05000	.	.
PHENOLS MG/L	< 0.01000	.	.	.	.	U 10.
SULFATE MG/L	< 5.00000	.	.	< 5.00000	.	< 5.00000
TEMPERATURE C	22.50000	19.70000	25.40000	.	16.00000	.
TEMPERATURE C	19.40000	.	20.40000	.	23.00000	.
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	7.40000	8.25000	3.98000	.	3.31000	.
ELEV. GROUND WATER SURFACE FT	32.94000	32.09000	36.36000	.	37.03000	.
***** INDICATORS *****	*	*	*	*	*	*
PH SU	6.63000	6.61000	7.44000	.	7.10000	.
PH, LAB SU	7.38000	.	7.46000	.	7.42000	.
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	445.00000	438.00000	350.00000	.	324.00000	.
TOC MG/L	2.00000	.	14.00000	.	8.00000	.
***** METALS *****	*	*	*	*	*	*
ALUMINUM MG/L	.	.	.	.	.	3.30000
ANTIMONY MG/L	.	.	.	.	.	U 24.
ARSENIC MG/L	.	.	.	.	.	U 2.
BARIUM MG/L	.	.	.	.	.	J 0.00000
BERYLLIUM MG/L	.	.	.	.	.	U 1.
CADMIUM MG/L	.	.	.	.	.	U 3.
CALCIUM MG/L	.	.	.	.	.	83.00000
CHROMIUM MG/L	.	.	.	.	.	0.01900
COBALT MG/L	.	.	.	.	.	U 5.
COPPER MG/L	.	.	.	.	.	U 3.
IRON MG/L	.	.	.	.	.	3.70000
LEAD MG/L	.	.	.	.	.	0.00800
MAGNESIUM MG/L	.	.	.	.	.	7.70000
MANGANESE MG/L	.	.	.	.	.	0.08400
MERCURY MG/L	.	.	.	.	.	.

NOT REPORTED
UNDETERMINATE AND NO RE-SPECTRA AVAILABLE

ANALYSIS TIME 1.5 HRS
QUALIFIED BELOW ML

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PAGE 1.2

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	.	12.60000	.	11.00000	.	16.00000
CYANIDE MG/L	.	.	.	.	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	0.40000	.	1.00000
NITRATE MG/L	.	< 0.05000	.	< 0.10000	.	0.10000
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	.	< 5.00000	.	< 5.00000	.	< 5.00000
TEMPERATURE C	20.00000	25.00000	24.00000	18.00000	20.00000	15.00000
TEMPERATURE C	22.00000	14.00000	27.00000	22.00000	25.00000	25.00000
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	7.76000	3.44000	6.54000	4.08000	9.24000	3.78000
ELEV. GROUND WATER SURFACE FT	32.58000	36.90000	34.30000	36.26000	31.10000	36.56000
***** INDICATORS *****	*	*	*	*	*	*
PH SU	7.18000	7.00000	7.11000	6.79000	7.39000	7.67000
PH, LAB SU	7.06000	7.44000	7.28000	7.11000	7.18000	7.21000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	382.00000	280.00000	296.00000	323.00000	405.00000	301.00000
TOC MG/L	9.00000	6.00000	10.00000	7.70000	5.03000	11.30000
***** METALS *****	*	*	*	*	*	*
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

U.S. GEOLOGICAL SURVEY

WATER RESOURCES DIVISION
NORTHWEST REGIONAL OFFICE

U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION, NORTHWEST REGIONAL OFFICE

WATER RESOURCES DIVISION
NORTHWEST REGIONAL OFFICE

WATER RESOURCES DIVISION

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W2A JEDBURG W-2A

PAGE 1.3

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
***** CONVENTIONALS *****	*	*	*	*		
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	.	11.00000	10.70000	14.50000	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	20.80000	26.60000	.	.	.
FLUORIDE MG/L	.	< 1.00000	< 1.00000	1.00000	.	.
NITRATE MG/L	.	< 1.00000	< 1.00000	< 1.00000	.	.
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	.	4.30000	18.00000	4.50000	.	.
TEMPERATURE C	20.00000	16.00000	19.00000	19.00000	.	.
TEMPERATURE C	25.00000	25.00000	25.00000	25.00000	.	.
***** ELEVATIONS/DEPTHS *****	*	*	*	*		
DEPTH TO WATER FT	7.77000	3.50000	7.40000	8.43000	.	.
ELEV. GROUND WATER SURFACE FT	32.57000	36.84000	32.94000	31.91000	.	.
***** INDICATORS *****	*	*	*	*		
PH SU	6.80000	7.07000	7.43000	7.38000	.	.
PH, LAB SU	7.49000	7.39000	8.40000	7.11000	.	.
SPEC. CONDUCTANCE, LAB UMHOS/CM	290.00000	.	.	475.00000	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	243.00000	335.00000	419.00000	417.00000	.	.
TOC MG/L	7.02000	23.80000	14.40000	62.00000	.	.
***** METALS *****	*	*	*	*		
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

1. ALL RESULTS ARE IN UNITS OF MG/L UNLESS OTHERWISE SPECIFIED.
2. UNDETERMINATE AND/OR NO READING SPECTRA AVAILABLE

GREATER THAN
QUANTIFIED BELOW

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L
ARSENIC MG/L
BARIUM MG/L
BERYLLIUM MG/L
CADMIUM MG/L
CHROMIUM MG/L
COPPER MG/L
LEAD MG/L
MERCURY MG/L
NICKEL MG/L
SELENIUM MG/L
SILVER MG/L
THALLIUM MG/L
ZINC MG/L
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L
BARIUM, TOTAL MG/L
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L

* NOT REPORTED
 * UNDETERMINATE AND/OR NO REE SPECTRA AVAILABLE
 * APPROXIMATE
 * GREATER THAN
 * QUANTIFIED BELOW MDL

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
NICKEL MG/L	.	.	.	.	.	U 7.
POTASSIUM MG/L	.	.	.	.	.	1.80000
SELENIUM MG/L	.	.	.	.	.	U 3.
SILVER MG/L	.	.	.	.	.	U 5.
SODIUM MG/L	.	.	.	.	.	19.00000
THALLIUM MG/L	.	.	.	.	.	U 3.
TIN MG/L	.	.	.	.	.	N 0.00000
VANADIUM MG/L	.	.	.	.	.	U 20.
ZINC MG/L	.	.	.	.	.	U 50.
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L	< 0.00500	.	.	.	.	.
ARSENIC MG/L	< 0.00500	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	< 0.01000	.	.	.	.	.
CADMIUM MG/L	< 0.01000	.	.	.	.	.
CHROMIUM MG/L	< 0.03000	.	0.03450	.	.	.
COPPER MG/L	< 0.03000	.	.	.	.	.
LEAD MG/L	< 0.00500	.	.	.	.	.
MERCURY MG/L	< 0.00050	.	.	.	.	.
NICKEL MG/L	< 0.03000	.	.	.	.	.
SELENIUM MG/L	< 0.00500	.	.	.	.	.
SILVER MG/L	< 0.03000	.	.	.	.	.
THALLIUM MG/L	< 0.00500	.	.	.	.	.
ZINC MG/L	< 0.03000	.	.	.	.	.
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L	.	.	.	.	.	2.30000
ANTIMONY, TOTAL MG/L	< 0.00500	.	.	.	.	.
ARSENIC, TOTAL MG/L	< 0.00500	.	.	.	.	0.00500
BARIUM, TOTAL MG/L	.	.	.	.	.	0.07000
BERYLLIUM, TOTAL MG/L	< 0.01000	.	.	.	.	< 0.01000
CADMIUM, TOTAL MG/L	< 0.01000	.	.	.	.	< 0.01000
CALCIUM, TOTAL MG/L	.	.	.	.	.	76.00000
CHROMIUM, TOTAL MG/L	< 0.03000	.	< 0.03000	.	.	< 0.03000
COBALT, TOTAL MG/L	.	.	.	.	.	< 0.03000
COPPER, TOTAL MG/L	< 0.03000	.	.	.	.	< 0.03000
IRON, TOTAL MG/L	.	.	.	.	.	2.70000
LEAD, TOTAL MG/L	< 0.00500	.	.	.	.	0.00500
MAGNESIUM, TOTAL MG/L	.	.	.	.	.	6.70000
MANGANESE, TOTAL MG/L	.	.	.	.	.	0.07000
MERCURY, TOTAL MG/L	0.00050	.	.	.	.	0.00050
NICKEL, TOTAL MG/L	0.03000	.	.	.	.	0.03000
POTASSIUM, TOTAL MG/L	.	.	.	.	.	1.50000
SELENIUM, TOTAL MG/L	0.00050	.	.	.	.	0.00050
SILVER, TOTAL MG/L	0.03000	.	.	.	.	0.03000

= NOT REPORTED

= UNDETERMINATE AND/OR NO USE SPECTRA AVAILABLE

= GREATER THAN

= QUANTIFIED BELOW MG/L

PAGE 2.2

1 - UNDETERMINED
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0041-3734/92 \$04.00
0041-3734/92 \$04.00

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	.	.
ANTIMONY MG/L
ARSENIC MG/L	.	< 0.05000	< 0.05000	.	.	.
BARIUM MG/L	.	0.14000	0.18000	.	.	.
BERYLLIUM MG/L
CADMIUM MG/L	.	< 0.01000	< 0.01000	.	.	.
CHROMIUM MG/L	.	< 0.05000	< 0.05000	.	.	.
COPPER MG/L
LEAD MG/L	.	< 0.05000	< 0.05000	.	.	.
MERCURY MG/L	.	< 0.00200	< 0.00200	.	.	.
NICKEL MG/L
SELENIUM MG/L	.	< 0.01000	< 0.01000	.	.	.
SILVER MG/L	.	< 0.05000	< 0.05000	.	.	.
THALLIUM MG/L
ZINC MG/L
***** METALS TOTAL *****	*	*	*	*	.	.
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L	.	< 0.05000	< 0.05000	< 0.05000	.	.
BARIUM, TOTAL MG/L	.	< 0.10000	< 0.10000	0.13000	.	.
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L	.	< 0.01000	< 0.01000	< 0.01000	.	.
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L	.	< 0.05000	< 0.05000	0.15000	.	.
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L	.	< 0.05000	< 0.05000	< 0.05000	.	.
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L	.	0.00200	0.00200	0.00200	.	.
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L	.	< 0.01000	< 0.01000	< 0.01000	.	.
SILVER, TOTAL MG/L	.	< 0.05000	< 0.05000	< 0.05000	.	.

1. NOT REPORTED
 2. UNDETERMINATE AND/OR NO REFERENCE AVAILABLE
 3. UNDETECTED
 4. APPROXIMATE
 5. GREATER THAN
 6. QUANTIFIED BELOW MDL

WELL NO: 3700W2A JEDBURG W-24

PAGE 3

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
SODIUM, TOTAL MG/L
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

U = UNDETECTED

A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN

J = QUANTIFIED BELOW MDL

WELL NO: 3700W2A JEDBURG W-2A

PAGE 3.1

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
SODIUM, TOTAL MG/L	.	.	.	.	.	17.00000
THALLIUM, TOTAL MG/L	< 0.00500	.	.	.	.	< 0.00500
VANADIUM, TOTAL MG/L	.	.	.	.	.	< 0.03000
ZINC, TOTAL MG/L	< 0.03000	.	.	.	.	0.04000
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED
 I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE
 U = UNDETECTED
 A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN
 J = QUANTIFIED BELOW MDL

WELL NO: 3700W2A JEDBURG W-2A

PAGE 3.2

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
SODIUM, TOTAL MG/L
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

U = UNDETECTED

A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN

J = QUANTIFIED BELOW MDL

WELL NO: 3700W2A JEDBURG W-2A

PAGE 3.3

	DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
SODIUM, TOTAL MG/L
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	.	.
***** ORGANIC BASE *****	*	*	*	*	*	.	.
***** ORGANIC OTHER *****	*	*	*	*	*	.	.
***** VOLATILE ORGANICS *****	*	*	*	*	*	.	.
***** RADIOACTIVITY *****	*	*	*	*	*	.	.

N = NOT REPORTED

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

U = UNDETECTED

A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN

J = QUANTIFIED BELOW MDL

BROWNING FERRIS INDUSTRIES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W3A JEDBURG W-3A

PAGE 1

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	33.70000	34.70000	.	30.80000	.	28.60000
CYANIDE MG/L	.	.	.	.	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	.	.	.	< 0.05000	.	< 0.05000
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	16.30000	15.90000	.	16.60000	.	16.70000
TEMPERATURE C	16.00000	18.90000	16.70000	22.40000	19.90000	22.00000
TEMPERATURE C	.	.	.	15.70000	21.00000	18.90000
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	5.66000	.	.	5.70000	5.12000	5.07000
ELEV. GROUND WATER SURFACE FT	.	9.04000	5.53000	37.09000	37.67000	37.72000
***** INDICATORS *****	*	*	*	*	*	*
PH SU	7.22000	6.82000	6.88000	7.06000	6.97000	7.14000
PH, LAB SU	.	.	.	7.18000	7.03000	7.13000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	686.00000	636.00000	560.00000	549.00000	602.00000	389.00000
TOC MG/L	64.10000	6.54000	.	2.91000	3.00000	2.00000
***** METALS *****	*	*	*	*	*	*
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

1. NOT REPORTED

2. UNDETERMINED

3. APPROXIMATE

4. UNDETERMINATE AND NO REF. SPECTRA AVAILABLE

5. GREATER THAN 1000 PPM

6. DETECTED BELOW 1000

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W3A JEDBURG W-3A

PAGE 1.1

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
ALKALINITY MG/L	.	.	.	.	.	368.00000
BICARBONATE MG/L	.	.	.	.	.	368.00000
CARBONATE MG/L	.	.	.	.	.	< 1.00000
CHLORIDE MG/L	35.00000	.	.	29.60000	.	38.00000
CYANIDE MG/L	< 0.01000	.	.	.	.	< 0.01000
CYANIDE MG/L	.	.	.	.	.	U 10.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	0.07100	.	.	.	.	0.08000
NITRITE AND NITRATE MG/L	.	.	.	< 0.05000	.	.
PHENOLS MG/L	< 0.01000	.	.	.	.	U 10.
SULFATE MG/L	16.80000	.	.	18.00000	.	16.40000
TEMPERATURE C	22.20000	20.10000	24.50000	.	16.00000	.
TEMPERATURE C	19.90000	.	20.50000	.	23.00000	.
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	7.51000	5.55000	5.52000	.	5.39000	.
ELEV. GROUND WATER SURFACE FT	35.28000	37.24000	37.27000	.	37.40000	.
***** INDICATORS *****	*	*	*	*	*	*
PH SU	6.88000	6.82000	7.48000	.	7.07000	.
PH, LAB SU	7.28000	.	7.13000	.	7.18000	.
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	605.00000	599.00000	611.00000	.	543.00000	.
TOC MG/L	2.00000	.	5.00000	.	1.00000	.
***** METALS *****	*	*	*	*	*	*
ALUMINUM MG/L	.	.	.	.	.	4.00000
ANTIMONY MG/L	.	.	.	.	.	U 24.
ARSENIC MG/L	.	.	.	.	.	U 2.
BARIUM MG/L	.	.	.	.	.	U 120.
BERYLLIUM MG/L	.	.	.	.	.	U 1.
CADMIUM MG/L	.	.	.	.	.	U 3.
CALCIUM MG/L	.	.	.	.	.	140.00000
CHROMIUM MG/L	.	.	.	.	.	0.02200
COBALT MG/L	.	.	.	.	.	U 5.
COPPER MG/L	.	.	.	.	.	U 3.
IRON MG/L	.	.	.	.	.	4.70000
LEAD MG/L	.	.	.	.	.	6.00500
MAGNESIUM MG/L	.	.	.	.	.	10.00000
MANGANESE MG/L	.	.	.	.	.	6.35000
MERCURY MG/L	.	.	.	.	.	.

NOT TESTED
A - (APPROXIMATE)
INDETERMINATE AND - U - PER SPECTRA AVAILABLE

NOT TESTED
IDENTIFIED BELOW

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W3A JEDBURG W-3A

PAGE 1.2

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	.	34.50000	.	27.00000	.	33.00000
CYANIDE MG/L	.	.	.	.	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	0.70000	.	1.00000
NITRATE MG/L	.	< 0.05000	.	< 0.10000	.	< 0.10000
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	.	17.50000	.	14.00000	.	5.00000
TEMPERATURE C	20.00000	25.00000	24.00000	18.00000	19.00000	16.00000
TEMPERATURE C	22.00000	15.00000	30.00000	22.00000	15.00000	25.00000
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	7.98000	5.88000	7.34000	6.52000	10.12000	6.28000
ELEV. GROUND WATER SURFACE FT	34.81000	36.91000	35.45000	36.27000	32.67000	36.51000
***** INDICATORS *****	*	*	*	*	*	*
PH SU	7.25000	6.97000	7.08000	7.04000	7.35000	8.31000
PH, LAB SU	7.08000	7.19000	7.22000	7.05000	7.26000	7.31000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	600.00000	441.00000	600.00000	486.00000	568.00000	446.00000
TOC MG/L	10.00000	4.00000	8.00000	3.00000	5.72000	14.60000
***** METALS *****	*	*	*	*	*	*
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

ALL ANALYSES BY
A. J. BROWNING FERRIS SERVICES, INC.
UNDETERMINATE AND/OR BELOW SPECTRA ANALYSIS

ALL ANALYSES BY
A. J. BROWNING FERRIS SERVICES, INC.
QUANTIFIED BELOW

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W3A JEDBURG W-3A

PAGE 1.3

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
***** CONVENTIONALS *****	*	*	*	*		
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	.	27.00000	21.60000	18.90000	.	.
CYANIDE MG/L	.	.	.	.	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	< 23.00000	28.70000	.	.	.
FLUORIDE MG/L	.	< 1.00000	< 1.00000	< 1.00000	.	.
NITRATE MG/L	.	< 1.00000	< 1.00000	< 1.00000	.	.
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	.	2.00000	9.00000	8.90000	.	.
TEMPERATURE C	20.00000	15.00000	18.00000	18.00000	.	.
TEMPERATURE C	25.00000	25.00000	25.00000	25.00000	.	.
***** ELEVATIONS/DEPTHS *****	*	*	*	*		
DEPTH TO WATER FT	9.90000	5.87000	7.20000	8.00000	.	.
ELEV. GROUND WATER SURFACE FT	32.89000	36.92000	35.59000	34.79000	.	.
***** INDICATORS *****	*	*	*	*		
PH SU	6.71000	7.24000	7.51000	7.41000	.	.
PH, LAB SU	7.21000	7.28000	6.93000	7.15000	.	.
SPEC. CONDUCTANCE, LAB UMHOS/CM	600.00000	.	.	645.00000	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	508.00000	485.00000	540.00000	534.00000	.	.
TOC MG/L	6.00000	48.30000	24.60000	157.00000	.	.
***** METALS *****	*	*	*	*		
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

U = UNDETECTED
A = - - (APPROXIMATE)
I = UNDETERMINATE AND/OR NO PEF. SPECTRA AVAILABLE

= GREATER THAN
= QUANTIFIED BELOW MDL

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L
ARSENIC MG/L
BARIUM MG/L
BERYLLIUM MG/L
CADMIUM MG/L
CHROMIUM MG/L
COPPER MG/L
LEAD MG/L
MERCURY MG/L
NICKEL MG/L
SELENIUM MG/L
SILVER MG/L
THALLIUM MG/L
ZINC MG/L
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L
BARIUM, TOTAL MG/L
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L

U = UNDETECTED
 A = APPROXIMATE
 I = UNDETERMINATE AND/OR NO REF SPECTRA AVAILABLE

GREATER THAN 1000 IF
 QUANTIFIED BELOW MG/L

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
NICKEL MG/L	.	.	.	.	.	U 8.
POTASSIUM MG/L	.	.	.	.	.	3.70000
SELENIUM MG/L	.	.	.	.	.	U 3.
SILVER MG/L	.	.	.	.	.	U 5.
SODIUM MG/L	.	.	.	.	.	38.00000
THALLIUM MG/L	.	.	.	.	.	U 3.
TIN MG/L	.	.	.	.	.	N 0.00000
VANADIUM MG/L	.	.	.	.	.	U 30.
ZINC MG/L	.	.	.	.	.	U 50.
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L	< 0.00500	.	.	.	.	.
ARSENIC MG/L	< 0.00500	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	< 0.01000	.	.	.	.	.
CADMIUM MG/L	< 0.01000	.	.	.	.	.
CHROMIUM MG/L	< 0.03000	.	< 0.03000	.	.	.
COPPER MG/L	< 0.03000	.	.	.	.	.
LEAD MG/L	< 0.00500	.	.	.	.	.
MERCURY MG/L	< 0.00050	.	.	.	.	.
NICKEL MG/L	< 0.03000	.	.	.	.	.
SELENIUM MG/L	< 0.00500	.	.	.	.	.
SILVER MG/L	< 0.03000	.	.	.	.	.
THALLIUM MG/L	< 0.00500	.	.	.	.	.
ZINC MG/L	< 0.03000	.	.	.	.	.
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L	.	.	.	.	.	0.54000
ANTIMONY, TOTAL MG/L	< 0.00500	.	.	.	.	.
ARSENIC, TOTAL MG/L	< 0.00500	.	.	.	.	0.00500
BARIUM, TOTAL MG/L	.	.	.	.	.	0.10000
BERYLLIUM, TOTAL MG/L	< 0.01000	.	.	.	.	< 0.01000
CADMIUM, TOTAL MG/L	< 0.01000	.	.	.	.	< 0.01000
CALCIUM, TOTAL MG/L	.	.	.	.	.	110.00000
CHROMIUM, TOTAL MG/L	< 0.03000	.	< 0.03000	.	.	< 0.03000
COBALT, TOTAL MG/L	.	.	.	.	.	< 0.03000
COPPER, TOTAL MG/L	< 0.03000	.	.	.	.	< 0.03000
IRON, TOTAL MG/L	.	.	.	.	.	1.80000
LEAD, TOTAL MG/L	< 0.00500	.	.	.	.	< 0.00500
MAGNESIUM, TOTAL MG/L	.	.	.	.	.	8.10000
MANGANESE, TOTAL MG/L	.	.	.	.	.	0.13000
MERCURY, TOTAL MG/L	< 0.00050	.	.	.	.	< 0.00050
NICKEL, TOTAL MG/L	< 0.03000	.	.	.	.	< 0.03000
POTASSIUM, TOTAL MG/L	.	.	.	.	.	3.10000
SELENIUM, TOTAL MG/L	< 0.00500	.	.	.	.	< 0.00500
SILVER, TOTAL MG/L	< 0.03000	.	.	.	.	< 0.03000

U = NOT REPORTED

A = APPROXIMATE

I = UNDETERMINATE AND/OR NO DATA AVAILABLE

> GREATER THAN

< QUANTIFIED BELOW

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L
ARSENIC MG/L
BARIUM MG/L
BERYLLIUM MG/L
CADMIUM MG/L
CHROMIUM MG/L
COPPER MG/L
LEAD MG/L
MERCURY MG/L
NICKEL MG/L
SELENIUM MG/L
SILVER MG/L
THALLIUM MG/L
ZINC MG/L
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L
BARIUM, TOTAL MG/L
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L

() = UNDETECTED
 () = UNDETERMINATE AND/OR NO REF SPECTRA AVAILABLE

() = GREATER THAN 1000 MG/L
 () = QUANTIFIED BELOW MG/L

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	.	.
ANTIMONY MG/L
ARSENIC MG/L	.	< 0.05000	< 0.05000	.	.	.
BARIUM MG/L	.	0.18000	0.14000	.	.	.
BERYLLIUM MG/L
CADMIUM MG/L	.	< 0.01000	< 0.01000	.	.	.
CHROMIUM MG/L	.	< 0.05000	< 0.05000	.	.	.
COPPER MG/L
LEAD MG/L	.	< 0.05000	< 0.05000	.	.	.
MERCURY MG/L	.	< 0.00200	< 0.00200	.	.	.
NICKEL MG/L
SELENIUM MG/L	.	< 0.01000	< 0.01000	.	.	.
SILVER MG/L	.	< 0.05000	< 0.05000	.	.	.
THALLIUM MG/L
ZINC MG/L
***** METALS TOTAL *****	*	*	*	*	.	.
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L	.	< 0.05000	< 0.05000	< 0.05000	.	.
BARIUM, TOTAL MG/L	.	0.10000	< 0.10000	0.16000	.	.
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L	.	< 0.01000	< 0.01000	< 0.01000	.	.
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L	.	< 0.05000	< 0.05000	0.14000	.	.
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L	.	< 0.05000	< 0.05000	< 0.05000	.	.
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L	.	0.00200	< 0.00200	0.00200	.	.
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L	.	0.01000	0.01000	0.01000	.	.
SILVER, TOTAL MG/L	.	0.05000	0.05000	0.05000	.	.

NOT REPORTED

APPROXIMATE

1 = UNDETERMINATE (NO SPECTRA AVAILABLE)

GREATER THAN = LESS THAN
QUANTIFIED BELOW MG/L

WELL NO: 3700W3A JEDBURG W-3A

PAGE 3

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
SODIUM, TOTAL MG/L
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED
 I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE
 U = UNDETECTED
 A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN
 J = QUANTIFIED BELOW MDL

WELL NO: 3700W3A JEDBURG W-3A

PAGE 3.1

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
SODIUM, TOTAL MG/L						35.00000
THALLIUM, TOTAL MG/L	< 0.00500	.	.	.	.	< 0.00500
VANADIUM, TOTAL MG/L		.	.	.	.	< 0.03000
ZINC, TOTAL MG/L	< 0.03000	.	.	.	.	0.03000
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED

U = UNDETECTED

A = +/- (APPROXIMATE)

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

> = GREATER THAN < = LESS THAN

J = QUANTIFIED BELOW MDL

WELL NO: 3700W3A JEDBURG W-3A

PAGE 3.2

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
SODIUM, TOTAL MG/L
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

U = UNDETECTED

A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN

J = QUANTIFIED BELOW MDL

WELL NO: 3700W3A JEDBURG W-3A

PAGE 3.3

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
SODIUM, TOTAL MG/L
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	.	.
***** ORGANIC BASE *****	*	*	*	*	.	.
***** ORGANIC OTHER *****	*	*	*	*	.	.
***** VOLATILE ORGANICS *****	*	*	*	*	.	.
***** RADIOACTIVITY *****	*	*	*	*	.	.

N = NOT REPORTED

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

U = UNDETECTED

A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN

J = QUANTIFIED BELOW MDL

BROWNING FERRIS INDUSTRIES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W4A JEDBURG W-4A

PAGE 1

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	12.50000	13.40000	.	10.50000	.	11.40000
CYANIDE MG/L	.	.	.	.	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	.	.	.	< 0.05000	.	< 0.05000
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	< 5.00000	< 5.00000	.	< 5.00000	.	< 5.00000
TEMPERATURE C	17.80000	19.30000	18.10000	22.30000	19.90000	21.90000
TEMPERATURE C	.	.	.	17.50000	19.00000	19.90000
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	0.00000	.	.	0.00000	0.01000	0.00000
ELEV. GROUND WATER SURFACE FT	.	4.18000	0.00000	39.88000	39.88000	39.88000
***** INDICATORS *****	*	*	*	*	*	*
PH SU	7.00000	6.78000	6.97000	7.25000	7.12000	7.45000
PH, LAB SU	.	.	.	7.29000	7.21000	7.27000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	398.00000	394.00000	351.00000	340.00000	358.00000	255.00000
TOC MG/L	2.37000	4.94000	.	1.30000	2.00000	< 1.00000
***** METALS *****	*	*	*	*	*	*
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

RECORDED

INDEXED
LABORATORY

UNDETERMINATE AND/OR NOT SPECIALLY AVAILABLE

ANALYZED BELOW

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W4A JEDBURG W-4A

PAGE 1.1

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
***** CONVENTIONALS *****						
ALKALINITY MG/L	.	.	.	.	.	236.00000
BICARBONATE MG/L	.	.	.	.	.	236.00000
CARBONATE MG/L	.	.	.	.	.	< 1.00000
CHLORIDE MG/L	12.80000	.	.	12.90000	.	13.20000
CYANIDE MG/L	< 0.01000	.	.	.	.	< 0.01000
CYANIDE MG/L	.	.	.	.	.	U 10.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	< 0.05000	.	.	.	.	< 0.05000
NITRITE AND NITRATE MG/L	.	.	.	< 0.05000	.	J 0.00000
PHENOLS MG/L	< 0.01000	.	.	.	.	< 5.00000
SULFATE MG/L	< 5.00000	.	.	< 5.00000	.	.
TEMPERATURE C	22.30000	19.10000	25.10000	.	18.00000	.
TEMPERATURE C	19.00000	.	20.90000	.	23.00000	.
***** ELEVATIONS/DEPTHS *****						
DEPTH TO WATER FT	3.04000	3.68000	0.00000	.	0.00000	.
ELEV. GROUND WATER SURFACE FT	36.84000	36.20000	39.88000	.	39.88000	.
***** INDICATORS *****						
PH SU	6.98000	6.92000	7.36000	.	7.31000	.
PH. LAB SU	7.39000	.	7.30000	.	7.29000	.
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	356.00000	367.00000	362.00000	.	343.00000	.
TOC MG/L	< 2.00000	.	2.00000	.	< 1.00000	.
***** METALS *****						
ALUMINUM MG/L	.	.	.	.	.	1.00000
ANTIMONY MG/L	.	.	.	.	.	U 24.
ARSENIC MG/L	.	.	.	.	.	U 2.
BARIUM MG/L	.	.	.	.	.	J 0.14000
BERYLLIUM MG/L	.	.	.	.	.	U 1.
CADMIUM MG/L	.	.	.	.	.	U 3.
CALCIUM MG/L	.	.	.	.	.	53.00000
CHROMIUM MG/L	.	.	.	.	.	U 6.
COBALT MG/L	.	.	.	.	.	U 4.
COPPER MG/L	.	.	.	.	.	U 3.
IRON MG/L	.	.	.	.	.	U 4.
LEAD MG/L	.	.	.	.	.	U 4.
MAGNESIUM MG/L	.	.	.	.	.	8.00000
MANGANESE MG/L	.	.	.	.	.	0.15000
MERCURY MG/L	.	.	.	.	.	0.00000

DO NOT REFRILL
DO NOT DETERMINE pH BY SPECTRA ANALYSIS

GREATER THAN
DO NOT DETERMINE BELOW

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W4A JEDBURG W-4A

PAGE 1.2

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
***** CONVENTIONALS *****						
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	.	12.30000	.	10.00000	.	16.00000
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	0.60000	.	1.00000
NITRATE MG/L	.	< 0.05000	.	< 0.10000	.	0.10000
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	.	< 5.00000	.	5.00000	.	< 5.00000
TEMPERATURE C	19.00000	25.00000	24.00000	18.00000	20.00000	16.00000
TEMPERATURE C	22.00000	15.00000	25.00000	22.00000	15.00000	25.00000
***** ELEVATIONS/DEPTHS *****						
DEPTH TO WATER FT	3.10000	0.45000	1.42000	0.83000	3.99000	0.50000
ELEV. GROUND WATER SURFACE FT	36.78000	39.43000	38.46000	39.05000	35.89000	39.38000
***** INDICATORS *****						
PH SU	7.20000	7.03000	7.10000	7.28000	7.35000	7.60000
PH, LAB SU	7.37000	7.35000	7.28000	7.09000	7.18000	7.20000
SPEC. CONDUCTANCE, LAB UMHS/CM						
SPECIFIC CONDUCTANCE UMHS/CM	364.00000	277.00000	374.00000	323.00000	392.00000	312.00000
TOC MG/L	5.00000	2.00000	1.00000	2.20000	5.57000	11.10000
***** METALS *****						
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

NOT REPORTED
UNDETERMINATE AND OR IN PP- (SPECTRA AVAILABLE)

DETERMINED THAT
QUANTIFIED BELOW MDL

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W4A JEDBURG W-4A

PAGE 1.3

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
***** CONVENTIONALS *****						
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	.	14.00000	13.90000	14.00000	.	.
CYANIDE MG/L	.	.	.	.	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	19.20000	18.70000	.	.	.
FLUORIDE MG/L	.	< 1.00000	< 1.00000	1.30000	.	.
NITRATE MG/L	.	< 1.00000	< 1.00000	< 1.00000	.	.
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	.	< 1.00000	2.00000	2.00000	.	.
TEMPERATURE C	19.00000	17.00000	18.00000	18.00000	.	.
TEMPERATURE C	25.00000	25.00000	25.00000	25.00000	.	.
***** ELEVATIONS/DEPTHS *****						
DEPTH TO WATER FT	3.95000	0.33000	4.62000	5.30000	.	.
ELEV. GROUND WATER SURFACE FT	35.93000	39.05000	35.26000	34.58000	.	.
***** INDICATORS *****						
PH SU	6.74000	7.30000	6.99000	7.08000	.	.
PH, LAB SU	7.10000	7.28000	7.22000	6.93000	.	.
SPEC. CONDUCTANCE, LAB UMHOS/CM	425.00000	.	.	490.00000	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	352.00000	354.00000	420.00000	419.00000	.	.
TOC MG/L	2.84000	16.80000	23.50000	15.20000	.	.
***** METALS *****						
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

IF UNDETERMINED, APPROXIMATE, OR INDETERMINATE AND NO REF. DATA AVAILABLE

GREATER THAN, LESS THAN, QUANTIFIED BELOW MG/L

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L
ARSENIC MG/L
BARIUM MG/L
BERYLLIUM MG/L
CADMIUM MG/L
CHROMIUM MG/L
COPPER MG/L
LEAD MG/L
MERCURY MG/L
NICKEL MG/L
SELENIUM MG/L
SILVER MG/L
THALLIUM MG/L
ZINC MG/L
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L
BARIUM, TOTAL MG/L
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L

ALL DATA REPORTED
 IF UNDETERMINATE AND/OR IF DATA NOT AVAILABLE

WEATHER DATA
 UNANTICIPATED

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
NICKEL MG/L	.	.	.	.	.	U 6.
POTASSIUM MG/L	.	.	.	.	.	2.20000
SELENIUM MG/L	.	.	.	.	.	J 0.00000
SILVER MG/L	.	.	.	.	.	U 5.
SODIUM MG/L	.	.	.	.	.	35.00000
THALLIUM MG/L	.	.	.	.	.	J 0.00000
TIN MG/L	.	.	.	.	.	N 0.00000
VANADIUM MG/L	.	.	.	.	.	U 5.
ZINC MG/L	.	.	.	.	.	J 0.00000
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L	< 0.00500	.	.	.	.	.
ARSENIC MG/L	< 0.00500	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	< 0.01000	.	.	.	.	.
CADMIUM MG/L	< 0.01000	.	.	.	.	.
CHROMIUM MG/L	< 0.03000	.	< 0.03000	.	.	.
COPPER MG/L	< 0.03000	.	.	.	.	.
LEAD MG/L	< 0.00500	.	.	.	.	.
MERCURY MG/L	< 0.00050	.	.	.	.	.
NICKEL MG/L	< 0.03000	.	.	.	.	.
SELENIUM MG/L	< 0.00500	.	.	.	.	.
SILVER MG/L	< 0.03000	.	.	.	.	.
THALLIUM MG/L	< 0.00500	.	.	.	.	.
ZINC MG/L	< 0.03000	.	.	.	.	.
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L	.	.	.	.	.	0.72000
ANTIMONY, TOTAL MG/L	< 0.00500	.	.	.	.	.
ARSENIC, TOTAL MG/L	< 0.00500	.	.	.	.	< 0.00500
BARIUM, TOTAL MG/L	.	.	.	.	.	0.14000
BERYLLIUM, TOTAL MG/L	< 0.01000	.	.	.	.	< 0.01000
CADMIUM, TOTAL MG/L	< 0.01000	.	.	.	.	< 0.01000
CALCIUM, TOTAL MG/L	.	.	.	.	.	74.00000
CHROMIUM, TOTAL MG/L	< 0.03000	.	< 0.03000	.	.	< 0.03000
COBALT, TOTAL MG/L	.	.	.	.	.	< 0.03000
COPPER, TOTAL MG/L	< 0.03000	.	.	.	.	< 0.03000
IRON, TOTAL MG/L	.	.	.	.	.	3.10000
LEAD, TOTAL MG/L	< 0.00500	.	.	.	.	0.00600
MAGNESIUM, TOTAL MG/L	.	.	.	.	.	8.00000
MANGANESE, TOTAL MG/L	.	.	.	.	.	6.21000
MERCURY, TOTAL MG/L	0.00050	.	.	.	.	0.00050
NICKEL, TOTAL MG/L	0.03000	.	.	.	.	0.03000
POTASSIUM, TOTAL MG/L	.	.	.	.	.	2.00000
SELENIUM, TOTAL MG/L	0.00500	.	.	.	.	0.00500
SILVER, TOTAL MG/L	0.03000	.	.	.	.	0.03000

ALL RESULTS
 IF UNDETERMINATE AND/OR NO PE SPECTRA AVAILABLE

QUANTIFIED BELOW MDL

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****
ANTIMONY MG/L
ARSENIC MG/L
BARIUM MG/L
BERYLLIUM MG/L
CADMIUM MG/L
CHROMIUM MG/L
COPPER MG/L
LEAD MG/L
MERCURY MG/L
NICKEL MG/L
SELENIUM MG/L
SILVER MG/L
THALLIUM MG/L
ZINC MG/L
***** METALS TOTAL *****
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L
BARIUM, TOTAL MG/L
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L

IN REFERENCE
 UNDETERMINATE AND NO REF SPECTRA AVAILABLE

- GREATER THAN
 - QUANTIFIED BELOW

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	.	.
ANTIMONY MG/L
ARSENIC MG/L	<	0.05000	<	0.05000	.	.
BARIUM MG/L	.	0.20000	<	0.10000	.	.
BERYLLIUM MG/L
CADMIUM MG/L	<	0.01000	<	0.01000	.	.
CHROMIUM MG/L	<	0.05000	<	0.05000	.	.
COPPER MG/L
LEAD MG/L	<	0.05000	<	0.05000	.	.
MERCURY MG/L	<	0.00200	<	0.00200	.	.
NICKEL MG/L
SELENIUM MG/L	<	0.01000	<	0.01000	.	.
SILVER MG/L	<	0.05000	<	0.05000	.	.
THALLIUM MG/L
ZINC MG/L
***** METALS TOTAL *****	*	*	*	*	.	.
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L	<	0.05000	<	0.05000	<	0.05000
BARIUM, TOTAL MG/L	.	0.11000	.	0.21000	.	0.14000
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L	<	0.01000	<	0.01000	<	0.01000
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L	<	0.05000	<	0.05000	.	0.06000
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L	<	0.05000	<	0.05000	<	0.05000
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L	.	0.00200	<	0.00200	.	0.00200
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L	.	0.01000	<	0.01000	.	0.01000
SILVER, TOTAL MG/L	.	0.05000	.	0.05000	.	0.05000

IF UNDETERMINED
 IF UNDETERMINED ANALYSIS REQUIRED SPECTRA AVAILABLE

GREATER THAN
 QUANTIFIED BELOW M.

Vanadium, Total mg/L	.	.	.	.	.	.	.	.	.	.	.
Zinc, Total mg/L	.	.	.	.	.	.	.	.	.	.	.
***** ORGANIC ACIDS *****	*	.	*	.	*	.	*	.	*	.	*
***** ORGANIC BASE *****	*	.	*	.	*	.	*	.	*	.	*
***** ORGANIC OTHER *****	*	.	*	.	*	.	*	.	*	.	*
***** VOLATILE ORGANICS *****	*	.	*	.	*	.	*	.	*	.	*
***** RADIOACTIVITY *****	*	.	*	.	*	.	*	.	*	.	*

N = NOT REPORTED
 I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE
 U = UNDETECTED
 A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN
 J = QUANTIFIED BELOW MDL

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/20/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
SODIUM, TOTAL MG/L	.	.	.	.	.	32.00000
THALLIUM, TOTAL MG/L	< 0.00500	.	.	.	.	< 0.00500
VANADIUM, TOTAL MG/L	.	.	.	.	.	< 0.03000
ZINC, TOTAL MG/L	< 0.03000	.	.	.	.	0.03000
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED

U = UNDETECTED

> = GREATER THAN < = LESS THAN

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

A = +/- (APPROXIMATE)

J = QUANTIFIED BELOW MDL

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
SODIUM, TOTAL MG/L
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED

U = UNDETECTED

> = GREATER THAN < = LESS THAN

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

A = +/- (APPROXIMATE)

J = QUANTIFIED BELOW MDL

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
SODIUM, TOTAL MG/L
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	.	.
***** ORGANIC BASE *****	*	*	*	*	.	.
***** ORGANIC OTHER *****	*	*	*	*	.	.
***** VOLATILE ORGANICS *****	*	*	*	*	.	.
***** RADIOACTIVITY *****	*	*	*	*	.	.

N = NOT REPORTED
I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

U = UNDETECTED
A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN
J = QUANTIFIED BELOW MDL

BROWNING FERRIS INDUSTRIES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W5A JEDBURG W-5A

PAGE 1

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
***** CONVENTIONALS *****						
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	14.50000	14.70000	.	12.70000	.	13.00000
CYANIDE MG/L	.	.	.	.	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	.	.	.	0.07940	.	< 0.05000
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	< 5.00000	9.49000	.	8.62000	.	5.67000
TEMPERATURE C	25.00000	20.80000	17.70000	22.50000	20.40000	22.00000
TEMPERATURE C	.	.	.	17.70000	19.00000	19.30000
***** ELEVATIONS/DEPTHS *****						
DEPTH TO WATER FT	6.91000	.	.	7.02000	6.97000	6.43000
ELEV. GROUND WATER SURFACE FT	.	11.34000	6.54000	34.85000	34.90000	35.44000
***** INDICATORS *****						
PH SU	6.86000	6.88000	6.81000	7.31000	7.44000	7.65000
PH, LAB SU	.	.	.	7.48000	7.31000	7.39000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	453.00000	493.00000	424.00000	410.00000	420.00000	290.00000
TOC MG/L	45.20000	8.66000	.	2.34000	2.00000	< 1.00000
***** METALS *****						
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

ALL RESULTS ARE APPROXIMATE
IF UNDER 1000 MG/L NO SPECTRA AVAILABLE

WATER THAT IS
QUALIFIED BELOW MG/L

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W5A JEDBURG W-5A

PAGE 1.1

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/21/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
ALKALINITY MG/L	.	.	.	.	.	321.00000
BICARBONATE MG/L	.	.	.	.	.	321.00000
CARBONATE MG/L	.	.	.	.	.	1.00000
CHLORIDE MG/L	14.40000	.	.	13.70000	.	13.70000
CYANIDE MG/L	< 0.01000	.	.	.	.	< 0.01000
CYANIDE MG/L	.	.	.	.	.	U 10.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	< 0.05000	.	.	.	.	< 0.05000
NITRITE AND NITRATE MG/L	.	.	.	< 0.05000	.	.
PHENOLS MG/L	< 0.01000	.	.	.	.	U 10.
SULFATE MG/L	8.84000	.	.	12.10000	.	13.40000
TEMPERATURE C	22.20000	19.80000	19.10000	.	18.00000	.
TEMPERATURE C	19.70000	.	21.40000	.	23.00000	.
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	9.59000	10.15000	6.73000	.	6.28000	.
ELEV. GROUND WATER SURFACE FT	32.28000	31.72000	35.14000	.	35.59000	.
***** INDICATORS *****	*	*	*	*	*	*
PH SU	7.11000	7.08000	7.36000	.	7.37000	.
PH, LAB SU	7.50000	.	7.39000	.	7.33000	.
SPEC. CONDUCTANCE, LAB UMHS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHS/CM	496.00000	486.00000	427.00000	.	439.00000	.
TOC MG/L	< 2.00000	.	4.00000	.	61.00000	.
***** METALS *****	*	*	*	*	*	*
ALUMINUM MG/L	.	.	.	.	.	18.00000
ANTIMONY MG/L	.	.	.	.	.	U 24.
ARSENIC MG/L	.	.	.	.	.	U 2.
BARIUM MG/L	.	.	.	.	.	U 0.00011
BERYLLIUM MG/L	.	.	.	.	.	U 2.
CADMIUM MG/L	.	.	.	.	.	U 3.
CALCIUM MG/L	.	.	.	.	.	230.00000
CHROMIUM MG/L	.	.	.	.	.	0.07400
COBALT MG/L	.	.	.	.	.	0.00800
COPPER MG/L	.	.	.	.	.	U 20.
IRON MG/L	.	.	.	.	.	16.00000
LEAD MG/L	.	.	.	.	.	0.07400
MAGNESIUM MG/L	.	.	.	.	.	12.00000
MANGANESE MG/L	.	.	.	.	.	0.20000
MERCURY MG/L	.	.	.	.	.	0.00000

ALL VALUES REPORTED AS DETECTED UNLESS OTHERWISE INDICATED
U = UNDETERMINATE; AND/OR D. = DATA NOT AVAILABLE

GREATER THAN 1000 MG/L
= QUANTIFIED BELOW 1000

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W5A JEDBURG W-5A

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DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
***** CONVENTIONALS *****	*	*	*	*	*	*
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	.	12.60000	.	14.00000	.	15.00000
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	.	.	.	.	.
FLUORIDE MG/L	.	.	.	0.50000	.	< 1.00000
NITRATE MG/L	.	< 0.05000	.	< 0.10000	.	< 0.10000
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	.	9.20000	.	9.00000	.	9.00000
TEMPERATURE C	20.00000	25.00000	24.00000	19.00000	19.00000	18.00000
TEMPERATURE C	22.00000	17.00000	26.00000	22.00000	15.00000	25.00000
***** ELEVATIONS/DEPTHS *****	*	*	*	*	*	*
DEPTH TO WATER FT	10.85000	7.27000	9.25000	8.25000	11.70000	7.86000
ELEV. GROUND WATER SURFACE FT	31.02000	34.60000	32.62000	33.62000	30.17000	34.01000
***** INDICATORS *****	*	*	*	*	*	*
PH SU	7.11000	6.71000	7.01000	7.18000	7.15000	6.84000
PH, LAB SU	7.27000	7.26000	7.38000	7.07000	7.28000	7.31000
SPEC. CONDUCTANCE, LAB UMHOS/CM	.	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	490.00000	420.00000	476.00000	412.00000	479.00000	404.00000
TOC MG/L	20.00000	6.00000	8.00000	7.50000	21.40000	7.17000
***** METALS *****	*	*	*	*	*	*
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

IF A QUALITY CONTROL SAMPLE IS NOT AVAILABLE, THE ANALYST SHALL
 IF A QUALITY CONTROL SAMPLE IS NOT AVAILABLE, THE ANALYST SHALL
 IF A QUALITY CONTROL SAMPLE IS NOT AVAILABLE, THE ANALYST SHALL

IF A QUALITY CONTROL SAMPLE IS NOT AVAILABLE, THE ANALYST SHALL
 IF A QUALITY CONTROL SAMPLE IS NOT AVAILABLE, THE ANALYST SHALL

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W5A JEDBURG W-5A

PAGE 1.3

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
***** CONVENTIONALS *****	*	*	*	*		
ALKALINITY MG/L	.	.	.	.	.	.
BICARBONATE MG/L	.	.	.	.	.	.
CARBONATE MG/L	.	.	.	.	.	.
CHLORIDE MG/L	.	11.00000	11.00000	12.60000	.	.
CYANIDE MG/L	.	.	.	.	.	.
CYANIDE MG/L	.	.	.	.	.	.
DISSOLVED ORGANIC CARBON MG/L	.	11.00000	25.70000	.	.	.
FLUORIDE MG/L	.	< 1.00000	< 1.00000	1.10000	.	.
NITRATE MG/L	.	1.20000	< 1.00000	< 1.00000	.	.
NITRITE AND NITRATE MG/L	.	.	.	.	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	.	28.00000	60.00000	23.50000	.	.
TEMPERATURE C	19.00000	18.00000	20.00000	20.00000	.	.
TEMPERATURE C	25.00000	25.00000	25.00000	25.00000	.	.
***** ELEVATIONS/DEPTHS *****	*	*	*	*		
DEPTH TO WATER FT	11.46000	6.90000	10.78000	11.36000	.	.
ELEV. GROUND WATER SURFACE FT	30.41000	34.97000	31.09000	30.51000	.	.
***** INDICATORS *****	*	*	*	*		
PH SU	6.77000	8.06000	7.14000	7.00000	.	.
PH, LAB SU	7.16000	7.56000	6.95000	7.21000	.	.
SPEC. CONDUCTANCE, LAB UMHOS/CM	525.00000	.	.	625.00000	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	469.00000	361.00000	587.00000	599.00000	.	.
TOC MG/L	2.74000	81.80000	29.10000	346.00000	.	.
***** METALS *****	*	*	*	*		
ALUMINUM MG/L	.	.	.	.	.	.
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CALCIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COBALT MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
IRON MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MAGNESIUM MG/L	.	.	.	.	.	.
MANGANESE MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.

1 = NOT REQUESTED
2 = UNDETERMINATE AND NO INFER SPECTRA AVAILABLE
3 = UNDETECTED
4 = APPROXIMATE

5 = GREATER THAN
6 = LESS THAN
7 = QUANTIFIED BELOW MDL

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L
ARSENIC MG/L
BARIUM MG/L
BERYLLIUM MG/L
CADMIUM MG/L
CHROMIUM MG/L
COPPER MG/L
LEAD MG/L
MERCURY MG/L
NICKEL MG/L
SELENIUM MG/L
SILVER MG/L
THALLIUM MG/L
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L
BARIUM, TOTAL MG/L
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L
SODIUM, TOTAL MG/L

UNDETECTED
 IN PERCENTAGE
 INDETERMINE AND OR NO PER. SPECIES AVAILABLE

GREATER THAN
 OR QUALIFIED BELOW TO

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/21/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
NICKEL MG/L	.	.	.	.	.	U 30.
POTASSIUM MG/L	.	.	.	.	.	J 3.40000
SELENIUM MG/L	.	.	.	.	.	J 0.00000
SILVER MG/L	.	.	.	.	.	U 5.
SODIUM MG/L	.	.	.	.	.	25.00000
THALLIUM MG/L	.	.	.	.	.	J 0.00000
TIN MG/L	.	.	.	.	.	N 0.00000
VANADIUM MG/L	.	.	.	.	.	0.06400
ZINC MG/L	.	.	.	.	.	J 0.17000
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L	< 0.00500	.	.	.	.	.
ARSENIC MG/L	< 0.00500	.	.	.	.	.
BARIUM MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	< 0.01000	.	.	.	.	.
CADMIUM MG/L	< 0.01000	.	.	.	.	.
CHROMIUM MG/L	< 0.03000	.	< 0.03000	.	.	.
COPPER MG/L	< 0.03000	.	.	.	.	.
LEAD MG/L	< 0.00500	.	.	.	.	.
MERCURY MG/L	< 0.00050	.	.	.	.	.
NICKEL MG/L	< 0.03000	.	.	.	.	.
SELENIUM MG/L	< 0.00500	.	.	.	.	.
SILVER MG/L	< 0.03000	.	.	.	.	.
THALLIUM MG/L	< 0.00500	.	.	.	.	.
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L	.	.	.	.	.	21.00000
ANTIMONY, TOTAL MG/L	< 0.00500	.	.	.	.	.
ARSENIC, TOTAL MG/L	< 0.00500	.	.	.	.	0.01000
BARIUM, TOTAL MG/L	.	.	.	.	.	0.11000
BERYLLIUM, TOTAL MG/L	< 0.01000	.	.	.	.	< 0.01000
CADMIUM, TOTAL MG/L	< 0.01000	.	.	.	.	0.01000
CALCIUM, TOTAL MG/L	.	.	.	.	.	290.00000
CHROMIUM, TOTAL MG/L	< 0.03000	.	< 0.03000	.	.	0.08000
COBALT, TOTAL MG/L	.	.	.	.	.	< 0.03000
COPPER, TOTAL MG/L	< 0.03000	.	.	.	.	0.03000
IRON, TOTAL MG/L	.	.	.	.	.	17.00000
LEAD, TOTAL MG/L	< 0.00500	.	.	.	.	0.10000
MAGNESIUM, TOTAL MG/L	.	.	.	.	.	12.00000
MANGANESE, TOTAL MG/L	.	.	.	.	.	0.22000
MERCURY, TOTAL MG/L	< 0.00050	.	.	.	.	0.00050
NICKEL, TOTAL MG/L	< 0.03000	.	.	.	.	0.03000
POTASSIUM, TOTAL MG/L	.	.	.	.	.	3.60000
SELENIUM, TOTAL MG/L	< 0.00500	.	.	.	.	0.00500
SILVER, TOTAL MG/L	< 0.03000	.	.	.	.	0.03000
SODIUM, TOTAL MG/L	.	.	.	.	.	25.00000

1. NOT REPORTED

2. UNDETERMINATE: LOW WAVELENGTH SPECTRA AVAILABLE

GREATER THAN: QUANTIFIED BELOW M.L.

WELL NO: 3700W5A JEDBURG W-5A

PAGE 2.2

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	*	*
ANTIMONY MG/L
ARSENIC MG/L
BARIUM MG/L
BERYLLIUM MG/L
CADMIUM MG/L
CHROMIUM MG/L
COPPER MG/L
LEAD MG/L
MERCURY MG/L
NICKEL MG/L
SELENIUM MG/L
SILVER MG/L
THALLIUM MG/L
***** METALS TOTAL *****	*	*	*	*	*	*
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L
BARIUM, TOTAL MG/L
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L
SODIUM, TOTAL MG/L

1. N.D. = NOT DETECTED.
 2. = UNDETERMINATE ANAL. OR NO REF. OR PREP. AVAILABLE

GREATER THAN
 QUANTIFIED BELOW 0.1

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
NICKEL MG/L
POTASSIUM MG/L
SELENIUM MG/L
SILVER MG/L
SODIUM MG/L
THALLIUM MG/L
TIN MG/L
VANADIUM MG/L
ZINC MG/L
***** METALS DISSOLVED *****	*	*	*	*	.	.
ANTIMONY MG/L
ARSENIC MG/L	.	< 0.05000	< 0.05000	.	.	.
BARIUM MG/L	.	0.10000	0.11000	.	.	.
BERYLLIUM MG/L
CADMIUM MG/L	.	< 0.01000	< 0.01000	.	.	.
CHROMIUM MG/L	.	< 0.05000	< 0.05000	.	.	.
COPPER MG/L
LEAD MG/L	.	< 0.05000	< 0.05000	.	.	.
MERCURY MG/L	.	< 0.00200	< 0.00200	.	.	.
NICKEL MG/L
SELENIUM MG/L	.	< 0.01000	< 0.01000	.	.	.
SILVER MG/L	.	< 0.05000	< 0.05000	.	.	.
THALLIUM MG/L
***** METALS TOTAL *****	*	*	*	*	.	.
ALUMINUM, TOTAL MG/L
ANTIMONY, TOTAL MG/L
ARSENIC, TOTAL MG/L	.	< 0.05000	< 0.05000	0.24000	.	.
BARIUM, TOTAL MG/L	.	0.12000	< 0.10000	0.63000	.	.
BERYLLIUM, TOTAL MG/L
CADMIUM, TOTAL MG/L	.	< 0.01000	< 0.01000	0.02000	.	.
CALCIUM, TOTAL MG/L
CHROMIUM, TOTAL MG/L	.	< 0.05000	< 0.05000	1.41000	.	.
COBALT, TOTAL MG/L
COPPER, TOTAL MG/L
IRON, TOTAL MG/L
LEAD, TOTAL MG/L	.	< 0.05000	< 0.05000	0.62000	.	.
MAGNESIUM, TOTAL MG/L
MANGANESE, TOTAL MG/L
MERCURY, TOTAL MG/L	.	< 0.00200	< 0.00200	0.00200	.	.
NICKEL, TOTAL MG/L
POTASSIUM, TOTAL MG/L
SELENIUM, TOTAL MG/L	.	< 0.01000	< 0.01000	0.01000	.	.
SILVER, TOTAL MG/L	.	0.05000	0.05000	0.05000	.	.
SODIUM, TOTAL MG/L

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GREATER THAN
 QUANTIFIED BELOW MG

WELL NO: 3700WSA JEDBURG W-5A

PAGE 3

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	02/24/92 Y
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

N = NOT REPORTED
 I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

U = UNDETECTED
 A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN
 J = QUANTIFIED BELOW MDL

DATE SAMPLED	12/04/91 Y	11/04/91 Y	08/21/91 Y	03/22/91 Y	02/12/91 Y	09/18/90 Y
THALLIUM, TOTAL MG/L	< 0.00500	.	.	.	.	< 0.00500
VANADIUM, TOTAL MG/L	.	.	.	.	.	0.07000
ZINC, TOTAL MG/L	< 0.03000	.	.	.	.	0.07000
ZINC, TOTAL MG/L	0.06060	.	.	.	.	.
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

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I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

U = UNDETECTED
A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN
J = QUANTIFIED BELOW MDL

WELL NO: 3700W5A JEDBURG W-5A

PAGE 3.2

DATE SAMPLED	08/23/90 Y	02/26/90 Y	08/23/89 Y	02/02/89 Y	08/05/88 Y	02/12/88 Y
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*

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 A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN
 J = QUANTIFIED BELOW MDL

DATE SAMPLED	08/27/87 Y	02/11/87 Y	09/12/86 Y	07/30/86 Y	Y	Y
THALLIUM, TOTAL MG/L
VANADIUM, TOTAL MG/L
ZINC, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	.	.
***** ORGANIC BASE *****	*	*	*	*	.	.
***** ORGANIC OTHER *****	*	*	*	*	.	.
***** VOLATILE ORGANICS *****	*	*	*	*	.	.
***** RADIOACTIVITY *****	*	*	*	*	.	.

N = NOT REPORTED

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

U = UNDETECTED

A = +/- (APPROXIMATE)

> = GREATER THAN < = LESS THAN

J = QUANTIFIED BELOW MDL

BROWNING FERRIS INDUSTRIES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W6 JEDBURG W-6

PAGE 1

DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	03/24/92 Y
***** CONVENTIONALS *****						
CHLORIDE MG/L	59.50000	62.60000	.	70.00000	.	.
CYANIDE MG/L	.	.	.	.	.	.
NITRATE MG/L	.	.	.	< 0.05000	.	.
PHENOLS MG/L	.	.	.	.	.	.
SULFATE MG/L	21.40000	< 5.00000	.	5.60000	.	.
TEMPERATURE C	25.00000	20.90000	15.50000	22.30000	20.30000	14.50000
TEMPERATURE C	.	.	.	15.40000	22.00000	.
***** ELEVATIONS/DEPTHS *****						
DEPTH TO WATER FT	6.84000	.	.	7.25000	7.48000	.
ELEV. GROUND WATER SURFACE FT	.	10.71000	7.20000	34.76000	34.53000	.
***** INDICATORS *****						
PH SU	7.15000	6.75000	5.51000	6.03000	6.13000	6.36000
PH SU	.	.	.	.	.	.
PH, LAB SU	.	.	.	6.15000	6.34000	.
SPECIFIC CONDUCTANCE UMHOS/CM	620.00000	700.00000	586.00000	719.00000	763.00000	642.00000
TOC MG/L	5.00000	10.80000	.	13.00000	5.00000	.
***** METALS *****						
***** METALS DISSOLVED *****						
ANTIMONY MG/L	.	.	.	.	.	.
ARSENIC MG/L	.	.	.	.	.	.
BERYLLIUM MG/L	.	.	.	.	.	.
CADMIUM MG/L	.	.	.	.	.	.
CHROMIUM MG/L	.	.	.	.	.	.
COPPER MG/L	.	.	.	.	.	.
LEAD MG/L	.	.	.	.	.	.
MERCURY MG/L	.	.	.	.	.	.
NICKEL MG/L	.	.	.	.	.	.
SELENIUM MG/L	.	.	.	.	.	.
SILVER MG/L	.	.	.	.	.	.
THALLIUM MG/L	.	.	.	.	.	.
ZINC MG/L	.	.	.	.	.	.
***** METALS TOTAL *****						
ANTIMONY, TOTAL MG/L	.	.	.	.	.	.
ARSENIC, TOTAL MG/L	.	.	.	.	.	.
BERYLLIUM, TOTAL MG/L	.	.	.	.	.	.
CADMIUM, TOTAL MG/L	.	.	.	.	.	.
CHROMIUM, TOTAL MG/L	.	.	.	.	.	.
COPPER, TOTAL MG/L	.	.	.	.	.	.
LEAD, TOTAL MG/L	.	.	.	.	.	.

NOT REPORTED

UNDETERMINATE AND/OR NO SPECTRA AVAILABLE

NOT REPORTED

UNDETERMINATE AND/OR NO SPECTRA AVAILABLE

GREATER THAN

QUANTIFIED BELOW

BROWNING FERRIS SERVICES, INC.
GROUND WATER SERVICES
REPORT 35

WELL NO: 3700W6

JEDBURG W-6

PAGE 1.1

DATE SAMPLED	02/24/92 Y	12/04/91 Y	11/04/91 Y	Y	Y	Y
***** CONVENTIONALS *****						
CHLORIDE MG/L	9.20000	37.00000	.	.	.	.
CYANIDE MG/L	.	0.01000	.	.	.	.
NITRATE MG/L	< 0.05000	< 0.05000	.	.	.	.
PHENOLS MG/L	.	< 0.01000	.	.	.	.
SULFATE MG/L	< 5.00000	8.32000	.	.	.	.
TEMPERATURE C	22.10000	22.20000	19.70000	.	.	.
TEMPERATURE C	19.20000	19.80000	.	.	.	.
***** ELEVATIONS/DEPTHS *****						
DEPTH TO WATER FT	6.54000	9.54000	10.61000	.	.	.
ELEV. GROUND WATER SURFACE FT	35.47000	32.47000	31.40000	.	.	.
***** INDICATORS *****						
PH SU	7.68000	6.64000	6.47000	.	.	.
PH SU	.	6.40000	.	.	.	.
PH, LAB SU	7.32000	.	.	.	.	.
SPECIFIC CONDUCTANCE UMHOS/CM	268.00000	612.00000	604.00000	.	.	.
TOC MG/L	2.00000	4.00000	.	.	.	.
***** METALS *****						
***** METALS DISSOLVED *****						
ANTIMONY MG/L	.	< 0.00500	.	.	.	.
ARSENIC MG/L	.	< 0.00500	.	.	.	.
BERYLLIUM MG/L	.	< 0.01000	.	.	.	.
CADMIUM MG/L	.	< 0.01000	.	.	.	.
CHROMIUM MG/L	.	< 0.03000	.	.	.	.
COPPER MG/L	.	< 0.03000	.	.	.	.
LEAD MG/L	.	< 0.00500	.	.	.	.
MERCURY MG/L	.	< 0.00050	.	.	.	.
NICKEL MG/L	.	< 0.03000	.	.	.	.
SELENIUM MG/L	.	< 0.00500	.	.	.	.
SILVER MG/L	.	< 0.03000	.	.	.	.
THALLIUM MG/L	.	< 0.00500	.	.	.	.
ZINC MG/L	.	< 0.03000	.	.	.	.
***** METALS TOTAL *****						
ANTIMONY, TOTAL MG/L	.	< 0.00500	.	.	.	.
ARSENIC, TOTAL MG/L	.	< 0.00500	.	.	.	.
BERYLLIUM, TOTAL MG/L	.	< 0.01000	.	.	.	.
CADMIUM, TOTAL MG/L	.	< 0.01000	.	.	.	.
CHROMIUM, TOTAL MG/L	.	< 0.03000	.	.	.	.
COPPER, TOTAL MG/L	.	< 0.03000	.	.	.	.
LEAD, TOTAL MG/L	.	< 0.00500	.	.	.	.

0 = NOT REPORTED

1 = UNDETERMINATE AND/OR NO PEP SPECTRA AVAILABLE

2 = APPROXIMATE

3 = GREATER THAN 5% LEAD THAT

4 = QUANTIFIED BELOW MDL

WELL NO: 37D0W6

JEDBURG W-6

PAGE 2

	DATE SAMPLED	02/17/94 Y	08/10/93 Y	04/15/93 Y	02/23/93 Y	08/28/92 Y	03/24/92 Y
MERCURY, TOTAL MG/L
NICKEL, TOTAL MG/L
SELENIUM, TOTAL MG/L
SILVER, TOTAL MG/L
THALLIUM, TOTAL MG/L
ZINC, TOTAL MG/L
***** ORGANIC ACIDS *****	*	*	*	*	*	*	*
***** ORGANIC BASE *****	*	*	*	*	*	*	*
***** ORGANIC OTHER *****	*	*	*	*	*	*	*
***** VOLATILE ORGANICS *****	*	*	*	*	*	*	*
***** RADIOACTIVITY *****	*	*	*	*	*	*	*

N = NOT REPORTED

U = UNDETECTED

A = +/- (APPROXIMATE)

I = UNDETERMINATE AND/OR NO REF. SPECTRA AVAILABLE

> = GREATER THAN < = LESS THAN

J = QUANTIFIED BELOW MDL

WELL NO: 3700W6

JEDBURG W-6

PAGE 2.1

=====							
DATE SAMPLED	02/24/92 Y	12/04/91 Y	11/04/91 Y	Y	Y	Y	Y

MERCURY, TOTAL MG/L	.	< 0.00050	.	.	.	.	.
NICKEL, TOTAL MG/L	.	< 0.03000	.	.	.	.	.
SELENIUM, TOTAL MG/L	.	< 0.00500	.	.	.	.	.
SILVER, TOTAL MG/L	.	< 0.03000	.	.	.	.	.
THALLIUM, TOTAL MG/L	.	< 0.00500	.	.	.	.	.
ZINC, TOTAL MG/L	.	< 0.03000	.	.	.	.	.
***** ORGANIC ACIDS *****	*	*	*
***** ORGANIC BASE *****	*	*	*
***** ORGANIC OTHER *****	*	*	*
***** VOLATILE ORGANICS *****	*	*	*
***** RADIOACTIVITY *****	*	*	*

N = NOT REPORTED

U = UNDETECTED

> = GREATER THAN < = LESS THAN

I = UNDETERMINE AND/OR NO REF. SPECTRA AVAILABLE

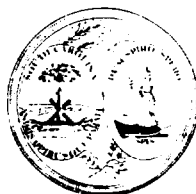
A = +/- (APPROXIMATE)

J = QUANTIFIED BELOW MDL

South Carolina Department of Health and Environmental Control

2600 Bull Street
Columbia, S.C. 29201

Commissioner
Michael D. Jarrett



Board

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Toney Graham, Jr. M.D., Vice-Chairman
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Oren L. Brady, Jr.
Moses H. Clarkson, Jr.
Euta M. Colvin, M.D.
Henry S. Jordan, M.D.

MEMORANDUM

TO: John Cresswell, Manager
Site Screening Section
Bureau of Solid and Hazardous Waste Management

FROM: Judy Canova, Hydrologist *JC*
Superfund and Solid Waste Section
Division of Hydrogeology
Bureau of Solid and Hazardous Waste Management

DATE: December 7, 1988

RE: Trident North Landfill (BFI - Jedburg)
SCD 980 558 233
Dorchester County
Preliminary Assessment - Hydrogeologic Review

A hydrogeologic review of the referenced site has been conducted to assist in completing a preliminary assessment for the Superfund program. The purpose of the hydrogeologic review is to provide information regarding the ground-water migration route of potential contaminants. It includes information obtained from South Carolina Water Resources Commission well tabulations, available site specific information from state files, a target survey using United States Geological Survey topographic quadrangles, and a literature review.

According to Park (1985), the following geologic units underlie the site:

<u>Name</u>	<u>Description</u>	<u>Depth of Occurrence</u>
Shallow Undifferentiated Pleistocene	Heterogeneous mixture of sands silts	0 to 75 feet
Cooper Group	Fine grained clayey phosphatic limestone interbedded with fine sands	75 to 275 feet

Santee Formation	Light colored fossiliferous limestone	275 to 500 feet
------------------	---------------------------------------	-----------------

These formations only include those lithologic units at the surface and those extending through possible aquifers of concern. The referenced facility is not in an area of karst topography.

The potential aquifers of concern include the Pleistocene and Santee. The Upper Cooper unit is a laterally extensive deposit of low hydraulic conductivity that likely restricts the vertical migration of ground water (Park, 1985). The aquifer does not appear to be the sole source of potable water in the area.

1986 soil boring logs on site indicate the unsaturated zone is composed of up to ninety percent sand. Sediments of this composition have an approximate saturated hydraulic conductivity of $> 10^{-3}$ cm/sec. Based on measured water levels in monitoring wells on site, the depth to ground-water is between five and twenty feet. The predominant ground-water flow direction appears to be towards the north and the south in the surficial unconfined aquifer.

A well inventory within a radius of four miles of the site reveals the following uses of ground-water from the aquifer of concern: domestic and community supply. From available information, it appears that the nearest domestic well developed within the aquifer of concern is ~~0.84 miles~~ to the east of the site, whereas the nearest community well is ~~0.63 miles~~ to the north (Wilson's Truck Stop).

200 feet (DWN) 0.5 miles (DWN)

The number of homes within a four mile radius of the site not located on a public water supply line (therefore assumed to utilize domestic wells), as identified from topographic quadrangles, are as follows:

Radius	Number of Houses	# People
0-1 Mile	28 88	334.4
1-2 Miles	58 110	448.4
2-3 Miles	73 108	400.4
3-4 Miles	195 262	995.6
Total	28T 576	2188.8

x 3.8 =

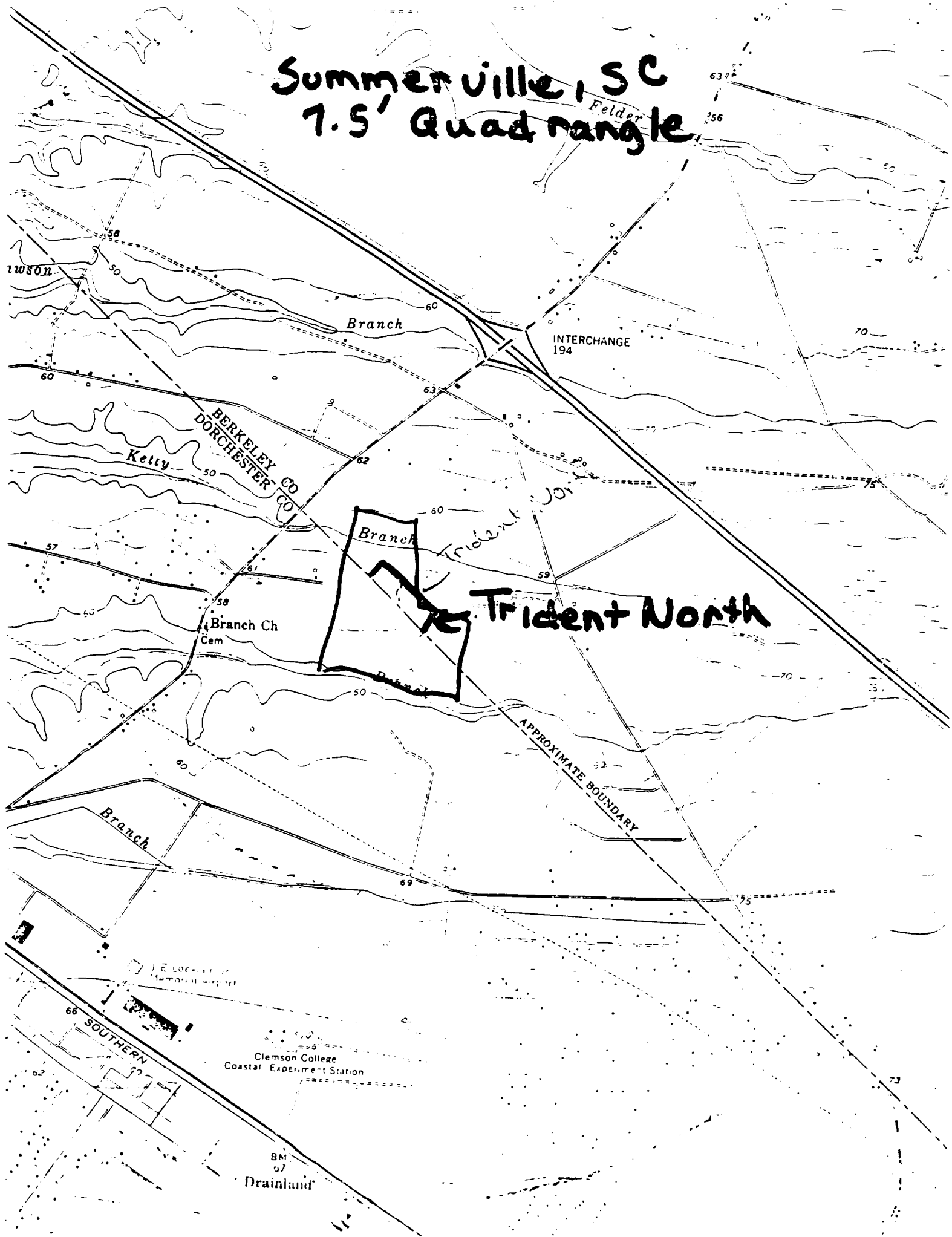
2188.8

D. Nix

References Cited:

Park, A. D., 1985, The Ground-Water Resources of Charleston, Berkeley, and Dorchester Counties, South Carolina: S.C. Water Resources Commission Report # 139, 146 p.

Summerville, SC 7.5' Quad range



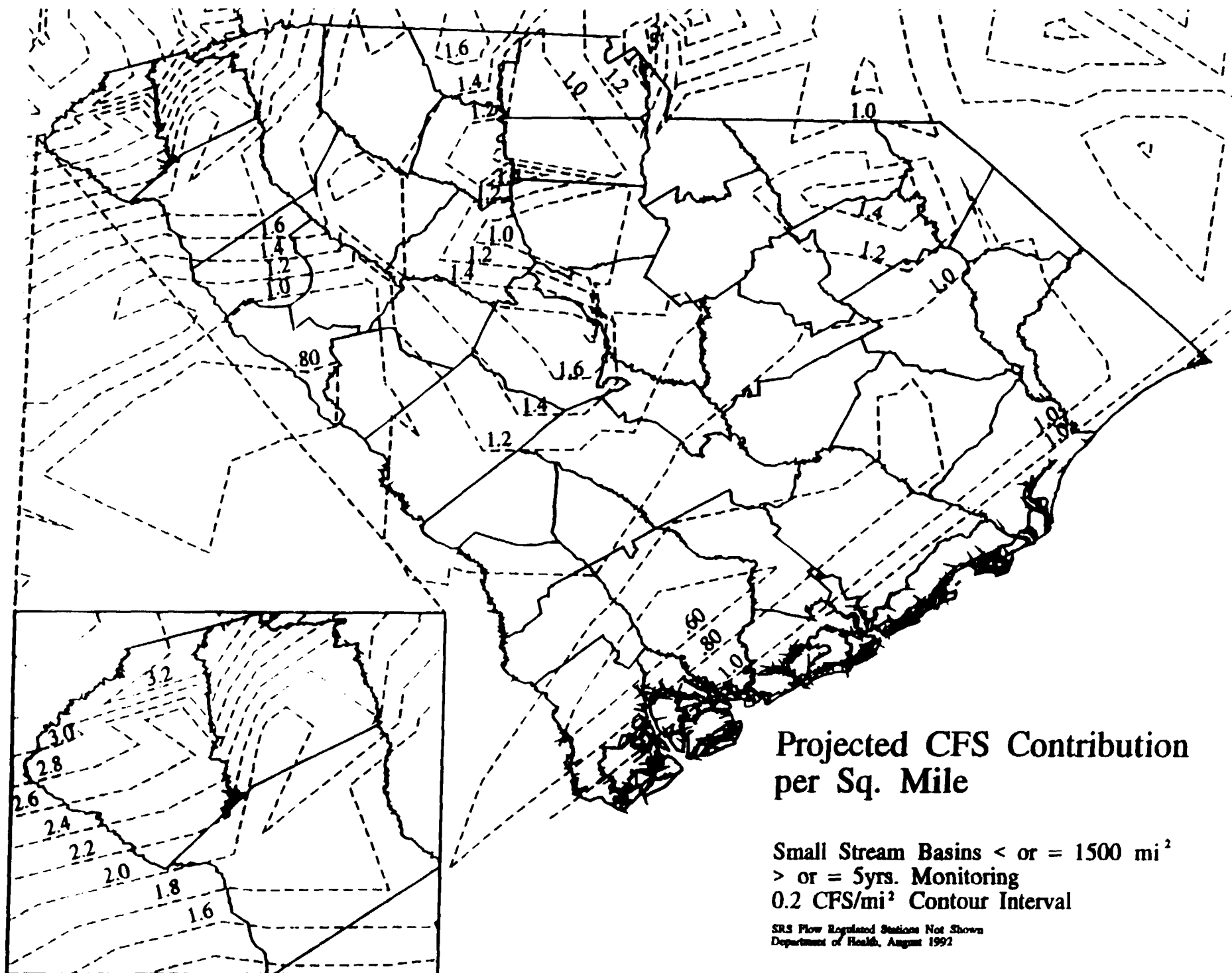
Contribution Per Mile ²	ESTIMATED FLOW IN CFS			
	< 10	10 - 100	100 - 1000	1000 - 10000
0.6	< 16.7	16.7 - 166	166 - 1666	1666 - 16666
0.8	< 12.5	12.5 - 125	125 - 1250	1250 - 12500
1.0	< 10	10 - 100	100 - 1000	1000 - 10000
1.2	< 8.3	8.3 - 83	83 - 833	833 - 8333
1.4	< 7.1	7.1 - 71	71 - 710	710 - 7100
1.6	< 6.3	6.3 - 63	63 - 630	630 - 6300
1.8	< 5.6	5.6 - 56	56 - 560	560 - 5600
2.0	< 5.0	5 - 50	50 - 500	500 - 5000
2.2	< 4.5	4.5 - 45	45 - 450	450 - 4500
2.4	< 4.2	4.2 - 42	42 - 420	420 - 4200
2.6	< 3.9	3.9 - 39	39 - 390	390 - 3900
2.8	< 3.6	3.6 - 36	36 - 360	360 - 3600
3.0	< 3.3	3.3 - 33	33 - 330	330 - 3300
3.2	< 3.1	3.1 - 31	31 - 310	310 - 3100

Use the attached map to determine which area of the state your site is in. Determine which projected cfs contribution factor you should use (ranges from 0.6 to 3.2). Scan the table to determine which range of flow you are probably within.

Ex. The contribution factor is 1.8. For the flow of a stream to be between 10 and 100, the square miles of drainage area would have to be between 5.6 and 56.

Keep in mind that your four mile radius is approximately 50 square miles, the three mile radius is approximately 28 square miles, the two mile radius is approximately 12.5 square miles, and the one mile radius is approximately 3 square miles. Also, on topo maps that are gridded into square kilometers, multiply the number of square kilometers by 0.3861 to estimate square miles.

If your flow falls near a break point, you may need to be more accurate in measuring the estimated drainage area. This table should be used to determine what flow it is reasonable to assume for your surface water body. For your reports, it is better to give an estimated number rather than just giving the range of flow.



S.C. DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL
BUREAU OF SOLID & HAZARDOUS WASTE

SITE BEING EVALUATED TRIDENT NORTH LANDFILL, 330406.1 LATITUDE 801246.7 LONGITUDE

THE ENDANGERED SPECIES FOUND WITHIN 4 MILES AND BETWEEN LATITUDE 32-57-40 TO 33-05-20 AND LONGITUDE 80-12-40 TO 80-18-00

THIS REPORT IS BASED UPON DATA PROVIDED BY THE S.C. HERITAGE TRUST FOUNDATION (01/92).

COMMON NAME SCIENTIFIC NAME	STATUS	LONGITUDE LATITUDE	DISTANCE FROM SITE	GRANK SRANK	DATE ADDED	TOPO MAP / COUNTY WHERE THE SPECIES IS LOCATED
YELLOW ASPHODEL NARTHECIUM AMERICANUM	NC	80-11-30 33-01-20	3.42 Miles SSE	G2 SH	06/01/22	SUMMERVILLE Dorchester
BALD CYPRESS-TUPELO GUM SWAMP	UN	80-13-15 33-06-17	2.55 Miles NNW	G5 S4	/ /	SUMMERVILLE Berkeley
PINELAND PLANTAIN PLANTAGO SPARSIFLORA	CU	80-11-30 33-01-20	3.42 Miles SSE	G2 S?	05/25/57	SUMMERVILLE Dorchester
PINELAND PLANTAIN PLANTAGO SPARSIFLORA	CU	80-11-49 33-04-23	0.99 Miles ENE	G2 S?	08/23/85	SUMMERVILLE Berkeley
SITE RECORD NNAPP	UN	80-13-15 33-06-15	2.51 Miles NNW		/ /	SUMMERVILLE Berkeley
GREEN-FLY ORCHID EPIDENDRUM CONOPSEUM	UN	80-13-15 33-06-17	2.55 Miles NNW	G3G4 S?	/ /	SUMMERVILLE Berkeley
POND PINE WOODLAND	UN	80-10-55 33-03-49	1.84 Miles ESE	G4G5 S3	07/08/76	SUMMERVILLE Berkeley
SPRINGS CLEARWEED PILEA FONTANA	UN	80-15-16 32-58-05	0.00 Miles UNK	G5 S?	10/25/57	CLUBHOUSE Dorchester
EASTERN FEW-FRUIT SEDGE CAREX OLIGOCARPA	UN	80-15-16 32-58-05	0.00 Miles UNK	G4 S?	05/27/57	CLUBHOUSE Dorchester

GRANK/SRANK - Nature Conservancy rating:

- G1 - Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction.
G2 - Imperiled globally because of rarity or factor(s) making it vulnerable.

STATUS - Legal status:

- FE - Federal Endangered
FT - Federal Threatened
NC - Of Concern, National (plants)

15

S.C. DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL
BUREAU OF SOLID & HAZARDOUS WASTE

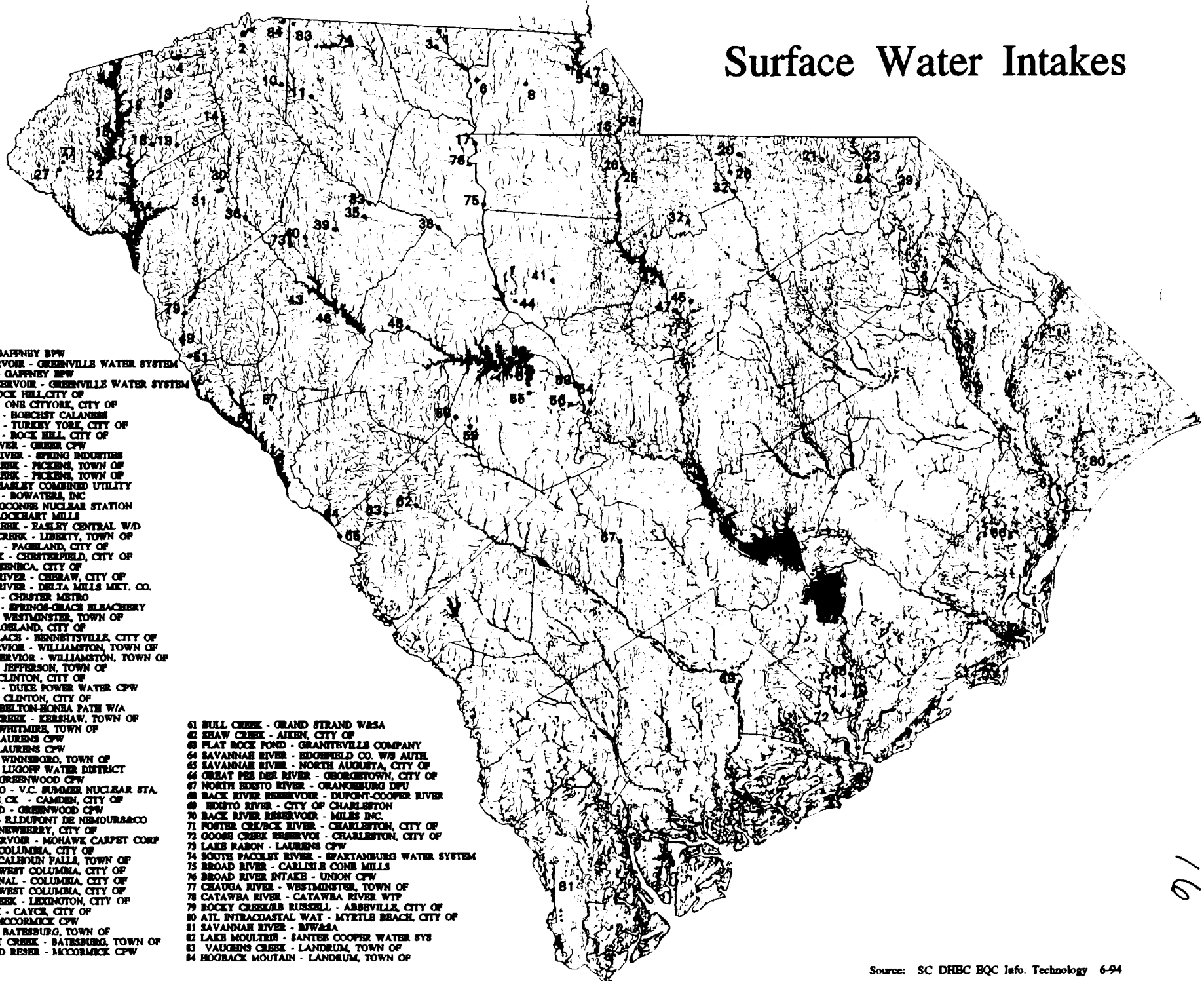
SITE BEING EVALUATED TRIDENT NORTH LANDFILL, 330406.1 LATITUDE 801246.7 LONGITUDE

THE ENDANGERED SPECIES FOUND WITHIN 4 MILES AND BETWEEN LATITUDE 32-57-40 TO 33-05-20 AND LONGITUDE 80-12-40 TO 80-18-00

THIS REPORT IS BASED UPON DATA PROVIDED BY THE S.C. HERITAGE TRUST FOUNDATION (01/92).

COMMON NAME SCIENTIFIC NAME	STATUS	LONGITUDE LATITUDE	DISTANCE FROM SITE	GRANK SRANK	DATE ADDED	TOPO MAP / COUNTY WHERE THE SPECIES IS LOCATED
G3 - Either very rare throughout its range or found locally in a restricted range, or having factors making it vulnerable.						RC - Of Concern, Regional (plant) SE - State Endangered (animals)
G4 - Apparently secure globally, though it may be rare in parts of its range.						ST - State Threatened (animals)
G5 - Demonstrably secure globally, though it may be rare in parts of its range.						SC - Of Concern, State (animals)
S1 - Critically imperiled state-wide because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation.						SL - Of Concern, State (plants)
S2 - Imperiled state-wide because of rarity or factor(s) making it vulnerable.						SX - State Extirpated
S3 - Rare or uncommon in state.						CU - Candidate (Federal review)
S4 - Apparently secure in state.						UN - Undetermined
S5 - Demonstrably secure in state.						

Surface Water Intakes



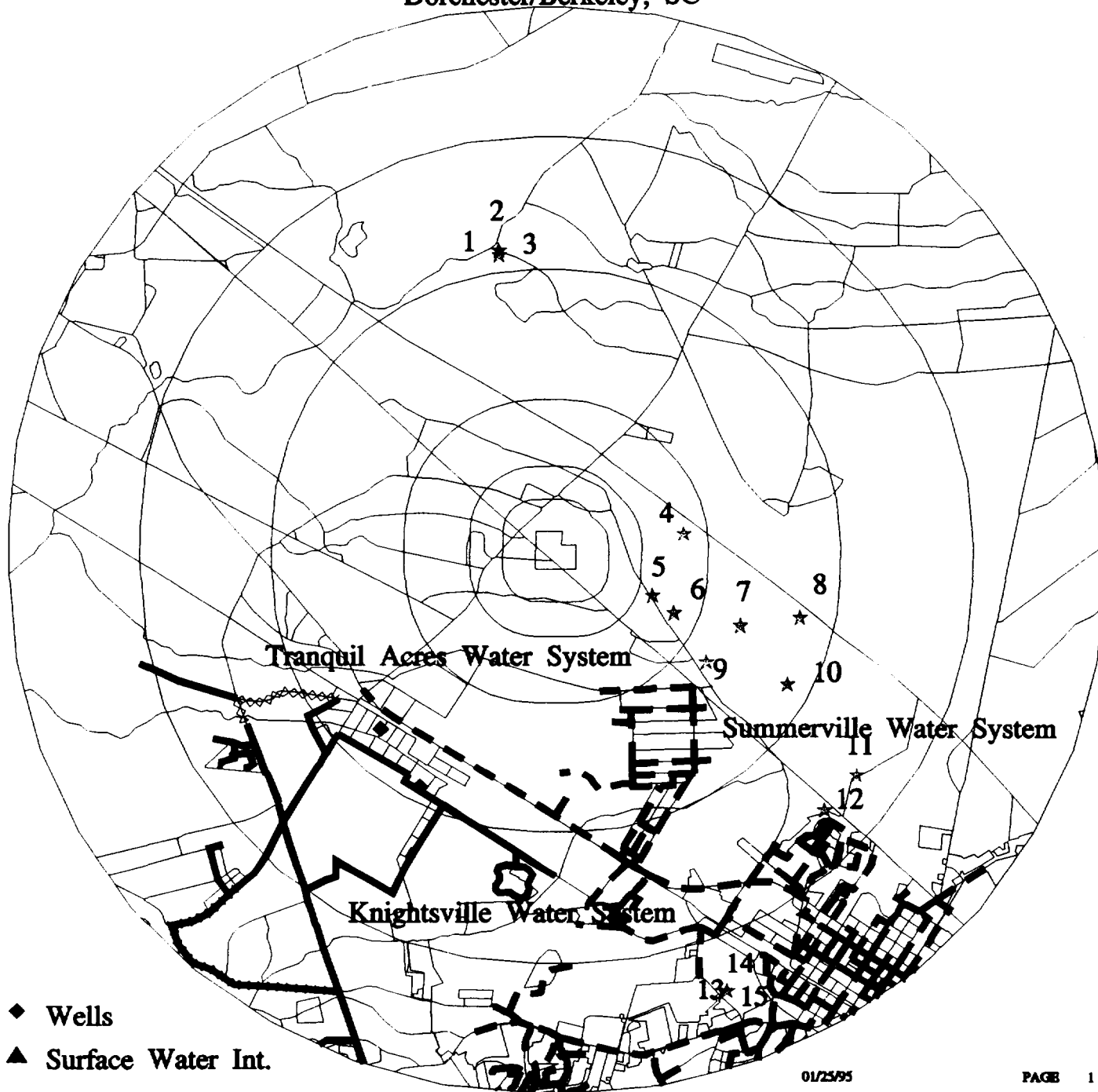
- 1 BROAD RIVER - GAFFNEY BFW
- 2 N SALUDA RESERVOIR - GREENVILLE WATER SYSTEM
- 3 LAKE WELCH - GAFFNEY BFW
- 4 TABLE ROCK RESERVOIR - GREENVILLE WATER SYSTEM
- 5 LAKE WYLLIE - ROCK HILL CITY OF
- 6 LAKE CAROLYN - ONE CITY OF
- 7 CATAWBA RIVER - BOCHIST CALANHE
- 8 LAKE CALDWELL - TURKEY YORK, CITY OF
- 9 CATAWBA RIVER - ROCK HILL, CITY OF
- 10 SOUTH TYGER RIVER - GREER CPW
- 11 MIDDLE TYGER RIVER - SPRING INDUSTRIES
- 12 TWELVE MILE CREEK - PICKENS, TOWN OF
- 13 TWELVE MILE CREEK - PICKENS, TOWN OF
- 14 SALUDA LAKE - EASLEY COMBINED UTILITY
- 15 CATAWBA RIVER - BOWATER, INC
- 16 LAKE KBOWIE - OCONEE NUCLEAR STATION
- 17 BROAD RIVER - LOCKHART MILLS
- 18 TWELVE MILE CREEK - EASLEY CENTRAL W/D
- 19 EIGHTEEN MILE CREEK - LIBERTY, TOWN OF
- 20 OLD TOWN POND - PAGELAND, CITY OF
- 21 THOMPSON CREEK - CHESTERFIELD, CITY OF
- 22 LAKE KBOWIE - SENICA, CITY OF
- 23 GREAT PEE DEE RIVER - CHERAW, CITY OF
- 24 GREAT PEE DEE RIVER - DELTA MILLS MGMT. CO.
- 25 CATAWBA RIVER - CHESTER METRO
- 26 CATAWBA RIVER - SPRING-GRAVE BLANCHERY
- 27 RAMSEY CREEK - WESTMINSTER, TOWN OF
- 28 LAKE TERRY - PAGELAND, CITY OF
- 29 LAKE PAUL WALLACE - BENNETTVILLE, CITY OF
- 30 BIG CREEK RESERVOIR - WILLIAMSTON, TOWN OF
- 31 CAMP CREEK RESERVOIR - WILLIAMSTON, TOWN OF
- 32 LYNCHES RIVER - JEFFERSON, TOWN OF
- 33 ENORES RIVER - CLINTON, CITY OF
- 34 LAKE HARTWELL - DUKE POWER WATER CPW
- 35 DUNCAN CREEK - CLINTON, CITY OF
- 36 SALUDA RIVER - BELTON-BONSA PATH W/A
- 37 HANGING ROCK CREEK - KERESHAW, TOWN OF
- 38 ENORES RIVER - WHITMIRE, TOWN OF
- 39 REEDY CREEK - LAURENS CPW
- 40 RABON CREEK - LAURENS CPW
- 41 192 ACRE LAKE - WINNSBORO, TOWN OF
- 42 LAKE WATERBEE - LUGOFF WATER DISTRICT
- 43 SALUDA RIVER - GREENWOOD CPW
- 44 LAKE MONTICELLO - V.C. SUMMER NUCLEAR STA.
- 45 LITTLE PINE TREE CK - CAMDEN, CITY OF
- 46 LAKE GREENWOOD - GREENWOOD CPW
- 47 WATERBEE RIVER - RIDGEMONT DE NEMOURS&CO
- 48 SALUDA RIVER - NEWBERRY, CITY OF
- 49 RUSSELL RESERVOIR - MOHAWK CARPET CORP
- 50 LAKE MURRAY - COLUMBIA, CITY OF
- 51 RUSSELL LAKE - CALHOUN FALLS, TOWN OF
- 52 LAKE MURRAY - WEST COLUMBIA, CITY OF
- 53 BROAD RIVER CANAL - COLUMBIA, CITY OF
- 54 SALUDA RIVER - WEST COLUMBIA, CITY OF
- 55 TWELVE MILE CREEK - LEXINGTON, CITY OF
- 56 CONGARIE CREEK - CAYCE, CITY OF
- 57 ROCKY CREEK - MCCORMICK CPW
- 58 DUNCAN CREEK - BATESBURG, TOWN OF
- 59 LIGHTWOOD KNOT CREEK - BATESBURG, TOWN OF
- 60 STROM THURMOND RESER - MCCORMICK CPW

- 61 BULL CREEK - GRAND STRAND W&A
- 62 SHAW CREEK - Aiken, CITY OF
- 63 FLAT ROCK POND - GRANITEVILLE COMPANY
- 64 SAVANNAH RIVER - EDGEFIELD CO. W/S AUTH.
- 65 SAVANNAH RIVER - NORTH AUGUSTA, CITY OF
- 66 GREAT PEE DEE RIVER - GEORGETOWN, CITY OF
- 67 NORTH BEDFORD RIVER - ORANGEBURG DPU
- 68 BACK RIVER RESERVOIR - DUPONT-COOPER RIVER
- 69 BEDFORD RIVER - CITY OF CHARLESTON
- 70 BACK RIVER RESERVOIR - MILLS, INC.
- 71 FOSTER CREEK RIVER - CHARLESTON, CITY OF
- 72 OCHEE CREEK RESERVOIR - CHARLESTON, CITY OF
- 73 LAKE RABON - LAURENS CPW
- 74 SOUTH PACOLIT RIVER - SPARTANBURG WATER SYSTEM
- 75 BROAD RIVER - CHARLES CONE MILLS
- 76 BROAD RIVER INTAKE - UNION CPW
- 77 CHAUDA RIVER - WESTMINSTER, TOWN OF
- 78 CATAWBA RIVER - CATAWBA RIVER WTP
- 79 ROCKY CREEK/RUSSELL - ABBEVILLE, CITY OF
- 80 ATL INTRACASTAL WAT - MYRTLE BEACH, CITY OF
- 81 SAVANNAH RIVER - B&W&A
- 82 LAKE MOULTRE - SANTER COOPER WATER SYS
- 83 VAUGHNS CREEK - LANDRUM, TOWN OF
- 84 HOGBACK MOUNTAIN - LANDRUM, TOWN OF

Trident North Landfill

SCD 980-558-233

Dorchester/Berkeley, SC



Population Estimates Given in Range of Miles:

Total Population =	18273	.50 - 1 =	175
3 - 4 =	13601	.25 - .50 =	92
2 - 3 =	3361	0 - .25 =	31
1 - 2 =	1013		

Source: SC DHEC BQC IT

★ Endangered Species

- 1 GREEN-FLY ORCHID
- 2 BALD CYPRESS-TUPELO GUM SWAMP
- 3 SITE RECORD NNAFP
- 4 PINELAND PLANTAIN
- 5 RED-COCKADED WOODPECKER
- 6 RED-COCKADED WOODPECKER
- 7 POND PINE WOODLAND
- 8 RED-COCKADED WOODPECKER
- 9 RED-COCKADED WOODPECKER
- 10 RED-COCKADED WOODPECKER
- 11 RED-COCKADED WOODPECKER
- 12 EASTERN WOODRAT
- 13 RAFINESQUE'S BIG-EARED BAT
- 14 PINELAND PLANTAIN
- 15 YELLOW ASPHODEL

OVERSIZED
:
DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL SERVICES DIVISION
REGION IV
COLLEGE STATION RD.
ATHENS, GA 30613

MEMORANDUM

DATE: May 6, 1991

SUBJECT: Analytical Data for Trident Landfill DWP-005,
SCD980513014

FROM: Gary Bennett, Chemist *Gary Bennett*
Laboratory Evaluation and
Quality Assurance Section

TO: Deborah A. Vaughn-Wright
Region IV NPL Coordinator

THRU: Wade Knight, Chief *WK*
Laboratory Evaluation and
Quality Assurance Section

Per the request in your April 18, 1991 memorandum we have provided the information on contract required quantitation limits (CRQLs) and "J" qualifiers for the subject data.

In response to Table 1 in your memo for CRQLs, please refer to Attachment 1, CRQLs for the organic target compound list (TCL), and Attachment 2, CRDLs for the inorganic target analyte list (TAL). With regard to Attachment 2, the inorganic statement of work (SOW) does not specify CRDLs for soil/sediment samples as does the organic SOW. However, because of some apparent confusion regarding the lack of inorganic soil/sediment CRDLs for previous cases, I have calculated a set of soil/sediment CRDLs and handwritten them to the side of the water CRDLs. The calculated inorganic soil/sediment CRDLs are based upon an assumed weight and are uncorrected for the percent moisture. Because the weight of sample digested and the percent moisture may vary from sample to sample, the actual CRDLs for inorganic soil/sediment samples will change from sample to sample. The handwritten numbers represent our best attempt at providing a list of "generic" soil/sediment CRDLs.

In Attachment 3 you will find the reasons for all "J" flagged data listed in Table 2 of your memo and the estimated bias for some, but not all, of the "J" data. The reason that bias may not be predicted for some "J" qualified data is related to the quality control parameters themselves. For example, some quality

control procedures such as matrix spikes, calibration verification standards, and surrogate standards are designed to indicate accuracy and may be used to predict bias. Other quality control procedures (matrix duplicates and matrix spike duplicates, serial dilutions, etc.) are designed to indicate precision. In instances where the "J" qualifier is assigned due to a precision parameter, the determinations do not agree well. No estimate of bias is associated with the lack of agreement.

If you have any questions please contact me at FTS 250-3287.

ATTACHMENT

cc: Al Hanke, WMD

Attachment 1

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)

Volatiles	CAS Number	Quantitation Limits*			On Column (ng)
		Water ug/L	Low Soil ug/Kg	Med. Soil ug/Kg	
1. Chloromethane	74-87-3	10	10	1200	(50)
2. Bromomethane	74-83-9	10	10	1200	(50)
3. Vinyl Chloride	75-01-4	10	10	1200	(50)
4. Chloroethane	75-00-3	10	10	1200	(50)
5. Methylene Chloride	75-09-2	10	10	1200	(50)
6. Acetone	67-64-1	10	10	1200	(50)
7. Carbon Disulfide	75-15-0	10	10	1200	(50)
8. 1,1-Dichloroethene	75-35-4	10	10	1200	(50)
9. 1,1-Dichloroethane	75-34-3	10	10	1200	(50)
10. 1,2-Dichloroethene (total)	540-59-0	10	10	1200	(50)
11. Chloroform	67-66-3	10	10	1200	(50)
12. 1,2-Dichloroethane	107-06-2	10	10	1200	(50)
13. 2-Butanone	78-93-3	10	10	1200	(50)
14. 1,1,1-Trichloroethane	71-55-6	10	10	1200	(50)
15. Carbon Tetrachloride	56-23-5	10	10	1200	(50)
16. Bromodichloromethane	75-27-4	10	10	1200	(50)
17. 1,2-Dichloropropane	78-87-5	10	10	1200	(50)
18. cis-1,3-Dichloropropene	10061-01-5	10	10	1200	(50)
19. Trichloroethene	79-01-6	10	10	1200	(50)
20. Dibromochloromethane	124-48-1	10	10	1200	(50)
21. 1,1,2-Trichloroethane	79-00-5	10	10	1200	(50)
22. Benzene	71-43-2	10	10	1200	(50)
23. trans-1,3-Dichloropropene	10061-02-6	10	10	1200	(50)
24. Bromoform	75-25-2	10	10	1200	(50)
25. 4-Methyl-2-pentanone	108-10-1	10	10	1200	(50)
26. 2-Hexanone	591-78-6	10	10	1200	(50)
27. Tetrachloroethene	127-18-4	10	10	1200	(50)
28. Toluene	108-88-3	10	10	1200	(50)
29. 1,1,2,2-Tetrachloroethane	79-34-5	10	10	1200	(50)
30. Chlorobenzene	108-90-7	10	10	1200	(50)
31. Ethyl Benzene	100-41-4	10	10	1200	(50)
32. Styrene	100-42-5	10	10	1200	(50)
33. Xylenes (Total)	1330-20-7	10	10	1200	(50)

* Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)

Semivolatiles	CAS Number	Quantitation Limits*			On Column (ng)
		Water ug/L	Low Soil ug/Kg	Med. Soil ug/Kg	
34. Phenol	108-95-2	10	330	10000	(20)
35. bis(2-Chloroethyl) ether	111-44-4	10	330	10000	(20)
36. 2-Chlorophenol	95-57-8	10	330	10000	(20)
37. 1,3-Dichlorobenzene	541-73-1	10	330	10000	(20)
38. 1,4-Dichlorobenzene	106-46-7	10	330	10000	(20)
39. 1,2-Dichlorobenzene	95-50-1	10	330	10000	(20)
40. 2-Methylphenol	95-48-7	10	330	10000	(20)
41. 2,2'-oxybis (1-Chloropropane)*	108-60-1	10	330	10000	(20)
42. 4-Methylphenol	106-44-5	10	330	10000	(20)
43. N-Nitroso-di-n- dipropylamine	621-64-7	10	330	10000	(20)
44. Hexachloroethane	67-72-1	10	330	10000	(20)
45. Nitrobenzene	98-95-3	10	330	10000	(20)
46. Isophorone	78-59-1	10	330	10000	(20)
47. 2-Nitrophenol	88-75-5	10	330	10000	(20)
48. 2,4-Dimethylphenol	105-67-9	10	330	10000	(20)
49. bis(2-Chloroethoxy) methane	111-91-1	10	330	10000	(20)
50. 2,4-Dichlorophenol	120-83-2	10	330	10000	(20)
51. 1,2,4-Trichlorobenzene	120-82-1	10	330	10000	(20)
52. Naphthalene	91-20-3	10	330	10000	(20)
53. 4-Chloroaniline	106-47-8	10	330	10000	(20)
54. Hexachlorobutadiene	87-68-3	10	330	10000	(20)
55. 4-Chloro-3-methylphenol	59-50-7	10	330	10000	(20)
56. 2-Methylnaphthalene	91-57-6	10	330	10000	(20)
57. Hexachlorocyclopentadiene	77-47-4	10	330	10000	(20)
58. 2,4,6-Trichlorophenol	88-06-2	10	330	10000	(20)
59. 2,4,5-Trichlorophenol	95-95-4	50	1700	50000	(100)
60. 2-Chloronaphthalene	91-58-7	10	330	10000	(20)
61. 2-Nitroaniline	88-74-4	50	1700	50000	(100)
62. Dimethylphthalate	131-11-3	10	330	10000	(20)
63. Acenaphthylene	208-96-8	10	330	10000	(20)
64. 2,6-Dinitrotoluene	606-20-2	10	330	10000	(20)
65. 3-Nitroaniline	99-09-2	50	1700	50000	(100)
66. Acenaphthene	83-32-9	10	330	10000	(20)
67. 2,4-Dinitrophenol	51-28-5	50	1700	50000	(100)
68. 4-Nitrophenol	100-02-7	50	1700	50000	(100)

* Previously known by the name bis(2-Chloroisopropyl) ether

(continued)

Semivolatiles	CAS Number	Quantitation Limits*			On Column (ng)
		Water ug/L	Low Soil ug/Kg	Med. Soil ug/Kg	
69. Dibenzofuran	132-64-9	10	330	10000	(20)
70. 2,4-Dinitrotoluene	121-14-2	10	330	10000	(20)
71. Diethylphthalate	84-66-2	10	330	10000	(20)
72. 4-Chlorophenyl-phenyl ether	7005-72-3	10	330	10000	(20)
73. Fluorene	86-73-7	10	330	10000	(20)
74. 4-Nitroaniline	100-01-6	50	1700	50000	(100)
75. 4,6-Dinitro-2-methylphenol	534-52-1	50	1700	50000	(100)
76. N-nitrosodiphenylamine	86-30-6	10	330	10000	(20)
77. 4-Bromophenyl-phenylether	101-55-3	10	330	10000	(20)
78. Hexachlorobenzene	118-74-1	10	330	10000	(20)
79. Pentachlorophenol	87-86-5	50	1700	50000	(100)
80. Phenanthrene	85-01-8	10	330	10000	(20)
81. Anthracene	120-12-7	10	330	10000	(20)
82. Carbazole	86-74-8	10	330	10000	(20)
83. Di-n-butylphthalate	84-74-2	10	330	10000	(20)
84. Fluoranthene	206-44-0	10	330	10000	(20)
85. Pyrene	129-00-0	10	330	10000	(20)
86. Butylbenzylphthalate	85-68-7	10	330	10000	(20)
87. 3,3'-Dichlorobenzidine	91-94-1	10	330	10000	(20)
88. Benzo(a)anthracene	56-55-3	10	330	10000	(20)
89. Chrysene	218-01-9	10	330	10000	(20)
90. bis(2-Ethylhexyl)phthalate	117-81-7	10	330	10000	(20)
91. Di-n-octylphthalate	117-84-0	10	330	10000	(20)
92. Benzo(b)fluoranthene	205-99-2	10	330	10000	(20)
93. Benzo(k)fluoranthene	207-08-9	10	330	10000	(20)
94. Benzo(a)pyrene	50-32-8	10	330	10000	(20)
95. Indeno(1,2,3-cd)pyrene	193-39-5	10	330	10000	(20)
96. Dibenz(a,h)anthracene	53-70-3	10	330	10000	(20)
97. Benzo(g,h,i)perylene	191-24-2	10	330	10000	(20)

* Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)

Pesticides/Aroclors	CAS Number	Quantitation Limits*		
		Water ug/L	Soil ug/Kg	On Column (pg)
98. alpha-BHC	319-84-6	0.05	1.7	5
99. beta-BHC	319-85-7	0.05	1.7	5
100. delta-BHC	319-86-8	0.05	1.7	5
101. gamma-BHC (Lindane)	58-89-9	0.05	1.7	5
102. Heptachlor	76-44-8	0.05	1.7	5
103. Aldrin	309-00-2	0.05	1.7	5
104. Heptachlor epoxide	1024-57-3	0.05	1.7	5
105. Endosulfan I	959-98-8	0.05	1.7	5
106. Dieldrin	60-57-1	0.10	3.3	10
107. 4,4'-DDE	72-55-9	0.10	3.3	10
108. Endrin	72-20-8	0.10	3.3	10
109. Endosulfan II	33213-65-9	0.10	3.3	10
110. 4,4'-DDD	72-54-8	0.10	3.3	10
111. Endosulfan sulfate	1031-07-8	0.10	3.3	10
112. 4,4'-DDT	50-29-3	0.10	3.3	10
113. Methoxychlor	72-43-5	0.50	17.0	50
114. Endrin ketone	53494-70-5	0.10	3.3	10
115. Endrin aldehyde	7421-36-3	0.10	3.3	10
116. alpha-Chlordane	5103-71-9	0.05	1.7	5
117. gamma-Chlordane	5103-74-2	0.05	1.7	5
118. Toxaphene	8001-35-2	5.0	170.0	500
119. Aroclor-1016	12674-11-2	1.0	33.0	100
120. Aroclor-1221	11104-28-2	1.0	33.0	100
121. Aroclor-1232	11141-16-5	2.0	67.0	200
122. Aroclor-1242	53469-21-9	1.0	33.0	100
123. Aroclor-1248	12672-29-6	1.0	33.0	100
124. Aroclor-1254	11097-69-1	1.0	33.0	100
125. Aroclor-1260	11096-82-5	1.0	33.0	100

* Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

There is no differentiation between the preparation of low and medium soil samples in this method for the analysis of Pesticides/Aroclors.

INORGANIC TARGET ANALYTE LIST (TAL)

Analyte	Contract Required Detection Limit (1,2)	
	(ug/L)	Soil (mg/kg)
Aluminum	200	40
Antimony	60	12
Arsenic	10	2
Barium	200	40
Beryllium	5	1
Cadmium	5	1
Calcium	5000	1000
Chromium	10	2
Cobalt	50	10
Copper	25	5
Iron	100	20
Lead	3	0.6
Magnesium	5000	1000
Manganese	15	3
Mercury	0.2	0.10
Nickel	40	8
Potassium	5000	1000
Selenium	5	1
Silver	10	2
Sodium	5000	1000
Thallium	10	2
Vanadium	50	10
Zinc	20	4
Cyanide	10	0.5

- (1) Subject to the restrictions specified in the first page of Part G, Section IV of Exhibit D (Alternate Methods - Catastrophic Failure) any analytical method specified in SOW Exhibit D may be utilized as long as the documented instrument or method detection limits meet the Contract Required Detection Limit (CRDL) requirements. Higher detection limits may only be used in the following circumstance:

If the sample concentration exceeds five times the detection limit of the instrument or method in use, the value may be reported even though the instrument or method detection limit may not equal the Contract Required Detection Limit. This is illustrated in the example below:

For lead:

Method in use - ICP

Instrument Detection Limit (IDL) - 40

Sample concentration - 220

Contract Required Detection Limit (CRDL) - 3

ATTACHMENT 3TRIDENT LANDFILL - CASE 12393
INFORMATION ON "J" DATA

<u>Sample</u>	<u>Analyte</u>	<u>Reason for Qualifier</u>	<u>Predicted Bias</u>
All soils/ sediments	lead	Matrix spike recov = 38.6% Matrix spike dup = 50.7	Low Unknown
TW-01	toluene	No flag on this sample	
TW-02	toluene	Below min quan. limit (MQL)	Unknown
SS-01, 02	toluene	Int. standard recovery low	Low
SS-08, 11	Benzo b/k fluoranthene	Below MQL	Unknown
SS-10, SB-08 SW-04	PCP	Below MQL	Unknown
SB-03	vinyl chloride toluene	Int. standard recov. low	Low
SB-10,11, 12	naphthalene aldrin PCP	Below MQL	Unknown
SD-01	toluene	Int. standard recov. low	Low
SD-02	toluene	Below MQL	Unknown
SD-09	toluene	Surrogate standard low	Low



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4WD-WPB

MEMORANDUM

DATE: **APR 18** 1991

SUBJECT: Analytical Data for Trident Landfill DWP-005
SCD980513014

FROM: Deborah A. Vaughn-Wright
Region IV NPL Coordinator

THRU: Al Hanke, Chief
Site Assessment Section

TO: Wade Knight, Chief
Laboratory Evaluation and
Quality Assurance Section

During the Quality Assurance Review of the Hazard Ranking System (HRS) score package for the above referenced site, several questions arose regarding the use of 'J' data. Further information is requested for the 'J' values, bias indicators wherever available and in some cases, contract required detection limits.

Attached are tables which detail specific samples and analyses of concern, and the type of information needed for each. Analytical data sheets are also attached.

If you have any questions, please contact me at FTS 257-5065 or Katherine Siders, Region IV FIT, at (404) 938-7710.

Attachments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL SERVICES DIVISION

REGION IV
COLLEGE STATION RD.
ATHENS, GA 30613



MEMORANDUM

DATE: May 6, 1991

SUBJECT: Analytical Data for Trident Landfill DWP-005,
SCD980513014

FROM: Gary Bennett, Chemist *Gary Bennett*
Laboratory Evaluation and
Quality Assurance Section

TO: Deborah A. Vaughn-Wright
Region IV NPL Coordinator

THRU: Wade Knight, Chief *WK*
Laboratory Evaluation and
Quality Assurance Section

Per the request in your April 18, 1991 memorandum we have provided the information on contract required quantitation limits (CRQLs) and "J" qualifiers for the subject data.

In response to Table 1 in your memo for CRQLs, please refer to Attachment 1, CRQLs for the organic target compound list (TCL), and Attachment 2, CRDLs for the inorganic target analyte list (TAL). With regard to Attachment 2, the inorganic statement of work (SOW) does not specify CRDLs for soil/sediment samples as does the organic SOW. However, because of some apparent confusion regarding the lack of inorganic soil/sediment CRDLs for previous cases, I have calculated a set of soil/sediment CRDLs and handwritten them to the side of the water CRDLs. The calculated inorganic soil/sediment CRDLs are based upon an assumed weight and are uncorrected for the percent moisture. Because the weight of sample digested and the percent moisture may vary from sample to sample, the actual CRDLs for inorganic soil/sediment samples will change from sample to sample. The handwritten numbers represent our best attempt at providing a list of "generic" soil/sediment CRDLs.

In Attachment 3 you will find the reasons for all "J" flagged data listed in Table 2 of your memo and the estimated bias for some, but not all, of the "J" data. The reason that bias may not be predicted for some "J" qualified data is related to the quality control parameters themselves. For example, some quality

control procedures such as matrix spikes, calibration verification standards, and surrogate standards are designed to indicate accuracy and may be used to predict bias. Other quality control procedures (matrix duplicates and matrix spike duplicates, serial dilutions, etc.) are designed to indicate precision. In instances where the "J" qualifier is assigned due to a precision parameter, the determinations do not agree well. No estimate of bias is associated with the lack of agreement.

If you have any questions please contact me at FTS 250-3287.

ATTACHMENT

cc: Al Hanke, WMD

SITE TRIDENT NORTH LF (FIT)
PROJECT # 90-804

STATE SC

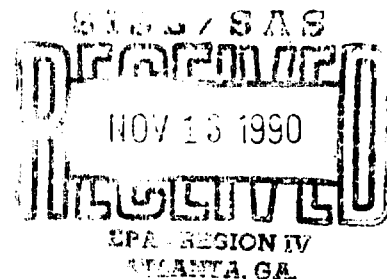
MANAGER ROGER FRANKLIN (NUS)
SHIPWEEK 09/17/90

SOILVOA BOOKED	11	DATA RECEIVED	/ /	FOR	SAMPLES
H2OVOA BOOKED	7	DATA RECEIVED	/ /	FOR	SAMPLES
SOILEXT BOOKED	10	DATA RECEIVED	/ /	FOR	SAMPLES
H2OEXT BOOKED	7	DATA RECEIVED	/ /	FOR	SAMPLES
SOILPEST BOOKED	10	DATA RECEIVED	/ /	FOR	SAMPLES
H2OPEST BOOKED	7	DATA RECEIVED	/ /	FOR	SAMPLES
SOILMET BOOKED	10	DATA RECEIVED	11/13/90	FOR 15	SAMPLES
H2OMET BOOKED	7	DATA RECEIVED	11/13/90	FOR 7	SAMPLES
SOILCN BOOKED	10	DATA RECEIVED	11/13/90	FOR 15	SAMPLES
H2OCN BOOKED	7	DATA RECEIVED	11/13/90	FOR 7	SAMPLES

SOILOTH1 BOOKED	0	DATA RECEIVED	/ /	FOR	SAMPLES
SOILOTH2 BOOKED	0	DATA RECEIVED	/ /	FOR	SAMPLES
H200TH1 BOOKED	0	DATA RECEIVED	/ /	FOR	SAMPLES
H200TH2 BOOKED	0	DATA RECEIVED	/ /	FOR	SAMPLES
OTHER1 BOOKED	0	DATA RECEIVED	/ /	FOR	SAMPLES
OTHER2 BOOKED	0	DATA RECEIVED	/ /	FOR	SAMPLES

OV REQUESTED? N

LAB(CLP/ESD) CLP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 11/06/90

SUBJECT: Results of Metals Analysis;
90-804 TRIDENT N. LANDFILL
JEDBERG SC
CASE NO: 14888

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

INORGANIC DATA QUALIFIERS REPORT

Case Number: 14888

Project Number: 90-804

Site: Trident N. Landfill, Jedberg, SC

<u>Water</u>	Element	Flag	Samples Affected	Reason
	As, Be, Mn, Se, V	U	All positives >IDL but <CRDL	Baseline instability
	Al, Ba, Ca, Cu, Fe, Mg, Na, Ni, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
	Hg	J	All	Matrix spike recovery = 74%
	Se	J	All	Matrix spike recovery = 72.1%
	Tl	J	All	Matrix spike recovery = 73.3%
	Zn	J	All	Matrix duplicate RPD = 57.8%
	Ba	J	All	Serial dilution percent difference = 11.6%
<u>Soil</u>				
	As, Be, Mn, Se, V	U	All positives >IDL but <CRDL	Baseline instability
	Al, Ba, Ca, Cu, Fe, Mg, Na, Ni, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
	Sb	J R	All positives All negatives	Matrix spike recovery = 15.3%
	As	J R	All positives All negatives	Matrix spike recovery = -9.3%
	Cu	J	All	Matrix duplicate RPD = 54.7%
	Se	J R	All positives All negatives	Matrix spike recovery = -90.5% Matrix duplicate RPD = 82.7%
	V	J	All	Matrix spike recovery = 73.7% Matrix duplicate RPD = 67.5%
	Fe	J	All	Matrix duplicate RPD = 36.1%
	Ca	J	All	Serial dilution percent difference = 40.4%

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50185 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: PB-01 COLLECTION START: 09/17/90 0740 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X737 **
**

UG/L ANALYTICAL RESULTS		UG/L ANALYTICAL RESULTS	
120U	ALUMINUM	2U	MANGANESE
24U	ANTIMONY	0.20UJ	MERCURY
2U	ARSENIC	6U	NICKEL
20UJ	BARIUM	72U	POTASSIUM
1U	BERYLLIUM	30UJ	SELENIUM
3U	CADMIUM	5U	SILVER
170U	CALCIUM	50U	SODIUM
6U	CHROMIUM	30UJ	THALLIUM
4U	COBALT	NA	TIN
3U	COPPER	3U	VANADIUM
110U	IRON	9UJ	ZINC
1U	LEAD		
30U	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50186 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-01 COLLECTION START: 09/18/90 1500 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X746 **
**

*** **		*** **	
UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
18000	ALUMINUM	200	MANGANESE
24U	ANTIMONY	0.20UJ	MERCURY
2U	ARSENIC	30U	NICKEL
110J	BARIUM	3400	POTASSIUM
2U	BERYLLIUM	30J	SELENIUM
3U	CADMIUM	5U	SILVER
230000	CALCIUM	25000	SODIUM
74	CHROMIUM	30J	THALLIUM
8	COBALT	NA	TIN
20U	COPPER	64	VANADIUM
16000	IRON	170J	ZINC
74	LEAD		
12000	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50187 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X753 **
**

*** **		*** **		*** **	
UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
3300	ALUMINUM	83	MANGANESE		
24U	ANTIMONY	0.20UJ	MERCURY		
2U	ARSENIC	7U	NICKEL		
82J	BARIUM	1800	POTASSIUM		
1U	BERYLLIUM	30J	SELENIUM		
3U	CADMIUM	5U	SILVER		
83000	CALCIUM	19000	SODIUM		
19	CHROMIUM	30J	THALLIUM		
5U	COBALT	NA	TIN		
3U	COPPER	20U	VANADIUM		
3700	IRON	50UJ	ZINC		
8	LEAD				
7700	MAGNESIUM				

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50188 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-03 COLLECTION START: 09/18/90 1200 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X754 **
**

*** UG/L ANALYTICAL RESULTS ***		*** UG/L ANALYTICAL RESULTS ***	
4000	ALUMINUM	150	MANGANESE
24U	ANTIMONY	0.20UJ	MERCURY
2U	ARSENIC	8U	NICKEL
120J	BARIUM	3700	POTASSIUM
1U	BERYLLIUM	30J	SELENIUM
3U	CADMIUM	5U	SILVER
140000	CALCIUM	38000	SODIUM
22	CHROMIUM	30J	THALLIUM
5U	COBALT	NA	TIN
3U	COPPER	30U	VANADIUM
4700	IRON	50UJ	ZINC
5	LEAD		
10000	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50189 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-04 COLLECTION START: 09/18/90 1435 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X755 **
**

UG/L ANALYTICAL RESULTS		UG/L ANALYTICAL RESULTS	
1000	ALUMINUM	150	MANGANESE
24U	ANTIMONY	0.20UJ	MERCURY
2U	ARSENIC	6U	NICKEL
140J	BARIUM	2200	POTASSIUM
1U	BERYLLIUM	30J	SELENIUM
3U	CADMIUM	5U	SILVER
53000	CALCIUM	35000	SODIUM
6U	CHROMIUM	30J	THALLIUM
4U	COBALT	NA	TIN
3U	COPPER	5U	VANADIUM
2900	IRON	40UJ	ZINC
4U	LEAD		
8000	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50190 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: PW-01 COLLECTION START: 09/18/90 0920 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X751 **
**

*** UG/L ANALYTICAL RESULTS ***		*** UG/L ANALYTICAL RESULTS ***	
26U	ALUMINUM	2U	MANGANESE
24U	ANTIMONY	0.20UJ	MERCURY
2U	ARSENIC	6U	NICKEL
20J	BARIUM	6700	POTASSIUM
1U	BERYLLIUM	15UJ	SELENIUM
3U	CADMIUM	5U	SILVER
2500	CALCIUM	150000	SODIUM
6U	CHROMIUM	15UJ	THALLIUM
5U	COBALT	NA	TIN
5U	COPPER	3U	VANADIUM
50U	IRON	50UJ	ZINC
4U	LEAD		
1300	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50191 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: PW-02 COLLECTION START: 09/18/90 1010 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X752 **
**

*** UG/L ANALYTICAL RESULTS ***		*** UG/L ANALYTICAL RESULTS ***	
40U	ALUMINUM	2U	MANGANESE
24U	ANTIMONY	0.20UJ	MERCURY
2U	ARSENIC	6U	NICKEL
20UJ	BARIUM	8800	POTASSIUM
1U	BERYLLIUM	30UJ	SELENIUM
3U	CADMIUM	5U	SILVER
4100	CALCIUM	170000	SODIUM
6U	CHROMIUM	15UJ	THALLIUM
4U	COBALT	NA	TIN
190U	COPPER	3U	VANADIUM
110U	IRON	30UJ	ZINC
17	LEAD		
2800	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50195  SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SS-01   COLLECTION START: 09/17/90  1100   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:   MD NUMBER: X740   **
** ** ** **

```

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
6800	ALUMINUM	5.2	MANGANESE
4.9UR	ANTIMONY	0.09U	MERCURY
2UJ	ARSENIC	1.2U	NICKEL
12	BARIUM	260	POTASSIUM
0.21U	BERYLLIUM	0.57UR	SELENIUM
0.62U	CADMIUM	1U	SILVER
630J	CALCIUM	40U	SODIUM
15	CHROMIUM	0.38U	THALLIUM
0.82U	COBALT	NA	TIN
4UJ	COPPER	30J	VANADIUM
15000J	IRON	4U	ZINC
4.8	LEAD	05	PERCENT MOISTURE
180	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

*** ** ** ** **
 ** PROJECT NO. 90-804 SAMPLE NO. 50196 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
 ** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
 ** STATION ID: SS-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
 ** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X749 **
 ** ** ** **

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
7000	ALUMINUM	4.9	MANGANESE
4.6UR	ANTIMONY	0.09U	MERCURY
2.3J	ARSENIC	1.1U	NICKEL
16	BARIUM	260	POTASSIUM
0.19U	BERYLLIUM	0.61UR	SELENIUM
0.57U	CADMIUM	0.95U	SILVER
470J	CALCIUM	40U	SODIUM
12	CHROMIUM	0.40U	THALLIUM
2U	COBALT	NA	TIN
2UJ	COPPER	24J	VANADIUM
16000J	IRON	6U	ZINC
11	LEAD	10	PERCENT MOISTURE
250	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50197 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SS-03 COLLECTION START: 09/18/90 1200 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X756 **
**

*** MG/KG ANALYTICAL RESULTS		*** MG/KG ANALYTICAL RESULTS	
7500	ALUMINUM	7.6	MANGANESE
5.1UR	ANTIMONY	0.10U	MERCURY
2.4J	ARSENIC	3U	NICKEL
23	BARIUM	270	POTASSIUM
0.21U	BERYLLIUM	0.60UR	SELENIUM
0.64U	CADMIUM	1.1U	SILVER
780J	CALCIUM	110U	SODIUM
15	CHROMIUM	0.40U	THALLIUM
2U	COBALT	NA	TIN
20J	COPPER	22J	VANADIUM
14000J	IRON	5.2	ZINC
11	LEAD	10	PERCENT MOISTURE
380	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50198 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SS-04 COLLECTION START: 09/17/90 1020 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X738 **
**

MG/KG ANALYTICAL RESULTS

8300 ALUMINUM
5.2UR ANTIMONY
2.7J ARSENIC
19 BARIUM
1U BERYLLIUM
0.66U CADMIUM
420J CALCIUM
13 CHROMIUM
1U COBALT
20UJ COPPER
23000J IRON
11 LEAD
230 MAGNESIUM

MG/KG ANALYTICAL RESULTS

4.4 MANGANESE
0.10U MERCURY
1.3U NICKEL
220 POTASSIUM
2J SELENIUM
1.1U SILVER
50U SODIUM
0.45U THALLIUM
NA TIN
52J VANADIUM
5U ZINC
16 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

*** ** ** ** **
 ** PROJECT NO. 90-804 SAMPLE NO. 50199 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
 ** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
 ** STATION ID: SS-05 COLLECTION START: 09/17/90 1245 STOP: 00/00/00 **
 ** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X743 **
 ** ** ** **

*** ** ** **
 MG/KG ANALYTICAL RESULTS
 6000 ALUMINUM
 5.2UR ANTIMONY
 2.6J ARSENIC
 9.3 BARIUM
 0.22U BERYLLIUM
 0.65U CADMIUM
 420J CALCIUM
 11 CHROMIUM
 0.87U COBALT
 3UJ COPPER
 12000J IRON
 6.4 LEAD
 180 MAGNESIUM

*** ** ** **
 MG/KG ANALYTICAL RESULTS
 4.1 MANGANESE
 0.11U MERCURY
 2U NICKEL
 230 POTASSIUM
 0.61UR SELENIUM
 1.1U SILVER
 30U SODIUM
 0.40U THALLIUM
 NA TIN
 25J VANADIUM
 5U ZINC
 09 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50200 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-01 COLLECTION START: 09/17/90 1125 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X741 **
**

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
14000	ALUMINUM	39	MANGANESE
5.9UR	ANTIMONY	0.12U	MERCURY
30J	ARSENIC	9U	NICKEL
41	BARIUM	1400	POTASSIUM
1U	BERYLLIUM	0.79UR	SELENIUM
0.73U	CADMIUM	1.2U	SILVER
1400J	CALCIUM	90U	SODIUM
18	CHROMIUM	0.53U	THALLIUM
5.4	COBALT	NA	TIN
90J	COPPER	30J	VANADIUM
22000J	IRON	34	ZINC
9.9	LEAD	25	PERCENT MOISTURE
1900	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50201 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-02 COLLECTION START: 09/18/90 1135 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X750 **
**

MG/KG ANALYTICAL RESULTS		MG/KG ANALYTICAL RESULTS	
7400	ALUMINUM	13	MANGANESE
5.1UR	ANTIMONY	0.10U	MERCURY
2.6J	ARSENIC	2U	NICKEL
17	BARIUM	210	POTASSIUM
0.21U	BERYLLIUM	0.72UR	SELENIUM
0.63U	CADMIUM	1.1U	SILVER
310UJ	CALCIUM	90U	SODIUM
12	CHROMIUM	0.48U	THALLIUM
2U	COBALT	NA	TIN
4UJ	COPPER	23J	VANADIUM
11000J	IRON	7U	ZINC
9.5	LEAD	20	PERCENT MOISTURE
270	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50202 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-03 COLLECTION START: 09/18/90 1225 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X866 **
**

MG/KG ANALYTICAL RESULTS		MG/KG ANALYTICAL RESULTS	
2200	ALUMINUM	2U	MANGANESE
5.5UR	ANTIMONY	0.10U	MERCURY
2UJ	ARSENIC	1.4U	NICKEL
11	BARIUM	44	POTASSIUM
1U	BERYLLIUM	0.62UR	SELENIUM
0.69U	CADMIUM	1.2U	SILVER
880J	CALCIUM	60U	SODIUM
3.3	CHROMIUM	0.42U	THALLIUM
0.92U	COBALT	NA	TIN
0.69UJ	COPPER	20UJ	VANADIUM
5300J	IRON	2U	ZINC
4.7	LEAD	16	PERCENT MOISTURE
120	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50203 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-04 COLLECTION START: 09/17/90 1035 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X739 **
**

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
2100	ALUMINUM	3U	MANGANESE
5.2UR	ANTIMONY	0.11U	MERCURY
0.45UR	ARSENIC	1.3U	NICKEL
9U	BARIUM	140	POTASSIUM
0.22U	BERYLLIUM	0.67UR	SELENIUM
0.65U	CADMIUM	1.1U	SILVER
230UJ	CALCIUM	40U	SODIUM
2.6	CHROMIUM	0.45U	THALLIUM
0.86U	COBALT	NA	TIN
4UJ	COPPER	5UJ	VANADIUM
1500J	IRON	6U	ZINC
3.6	LEAD	19	PERCENT MOISTURE
130	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50204 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-05 COLLECTION START: 09/17/90 1310 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X744 **
**

MG/KG
9000 ALUMINUM
6.3UR ANTIMONY
8.6J ARSENIC
38 BARIUM
1U BERYLLIUM
0.79U CADMIUM
520J CALCIUM
7.5 CHROMIUM
2.9 COBALT
40J COPPER
5700J IRON
12 LEAD
780 MAGNESIUM

ANALYTICAL RESULTS

MG/KG
21 MANGANESE
0.12U MERCURY
5U NICKEL
780 POTASSIUM
0.70UR SELENIUM
1.3U SILVER
80U SODIUM
0.47U THALLIUM
NA TIN
200J VANADIUM
30U ZINC
25 PERCENT MOISTURE

ANALYTICAL RESULTS

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50205 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-06 COLLECTION START: 09/18/90 1445 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X867 **
**

MG/KG ANALYTICAL RESULTS

1900 ALUMINUM
5.4UR ANTIMONY
1UJ ARSENIC
14 BARIUM
2U BERYLLIUM
0.68U CADMIUM
640J CALCIUM
6.5 CHROMIUM
0.91U COBALT
0.68UJ COPPER
430J IRON
4.8 LEAD
120 MAGNESIUM

MG/KG ANALYTICAL RESULTS

3U MANGANESE
0.12U MERCURY
1.4U NICKEL
54 POTASSIUM
0.66UR SELENIUM
1.1U SILVER
60U SODIUM
0.44U THALLIUM
NA TIN
6UJ VANADIUM
2U ZINC
18 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50206 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SD-01 COLLECTION START: 09/17/90 1555 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X748 **
**

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
7000	ALUMINUM	15	MANGANESE
5.9UR	ANTIMONY	0.12U	MERCURY
2.7J	ARSENIC	3U	NICKEL
25	BARIUM	310	POTASSIUM
1U	BERYLLIUM	10J	SELENIUM
0.74U	CADMIUM	1.2U	SILVER
1300J	CALCIUM	70U	SODIUM
21	CHROMIUM	0.44U	THALLIUM
2U	COBALT	NA	TIN
4UJ	COPPER	23J	VANADIUM
12000J	IRON	20U	ZINC
13	LEAD	23	PERCENT MOISTURE
380	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50207 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SD-02 COLLECTION START: 09/17/90 1535 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X747 **
**

*** MG/KG ANALYTICAL RESULTS		*** MG/KG ANALYTICAL RESULTS	
5900	ALUMINUM	4.7	MANGANESE
5.4UR	ANTIMONY	0.12U	MERCURY
3UJ	ARSENIC	1.3U	NICKEL
17	BARIUM	93	POTASSIUM
0.22U	BERYLLIUM	1UJ	SELENIUM
0.67U	CADMIUM	1.1U	SILVER
820J	CALCIUM	70U	SODIUM
9.1	CHROMIUM	0.46U	THALLIUM
2U	COBALT	NA	TIN
2UJ	COPPER	33J	VANADIUM
21000J	IRON	3U	ZINC
7	LEAD	17	PERCENT MOISTURE
170	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50208 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SD-03 COLLECTION START: 09/17/90 1200 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X745 **
**

*** **		*** **	
MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
11000	ALUMINUM	18	MANGANESE
5.8UR	ANTIMONY	0.12U	MERCURY
2UJ	ARSENIC	3U	NICKEL
30	BARIUM	380	POTASSIUM
1U	BERYLLIUM	0.79UR	SELENIUM
0.72U	CADMIUM	1.2U	SILVER
1200J	CALCIUM	80U	SODIUM
15	CHROMIUM	0.52U	THALLIUM
1.8	COBALT	NA	TIN
3UJ	COPPER	29J	VANADIUM
15000J	IRON	20U	ZINC
9.9	LEAD	28	PERCENT MOISTURE
390	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

METALS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50209 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SD-04 COLLECTION START: 09/17/90 1135 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: MD NUMBER: X742 **
**

*** **		*** **	
MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
6300	ALUMINUM	8.3	MANGANESE
5.5UR	ANTIMONY	0.11U	MERCURY
30J	ARSENIC	2U	NICKEL
20	BARIUM	260	POTASSIUM
1U	BERYLLIUM	0.73UR	SELENIUM
0.68U	CADMIUM	1.1U	SILVER
1700J	CALCIUM	130U	SODIUM
9.7	CHROMIUM	0.49U	THALLIUM
2U	COBALT	NA	TIN
30J	COPPER	23J	VANADIUM
18000J	IRON	6U	ZINC
8.3	LEAD	24	PERCENT MOISTURE
430	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 11/06/90

SUBJECT: Results of Specified Analysis;
90-804 TRIDENT N. LANDFILL
JEDBERG SC
CASE NO: 14888

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

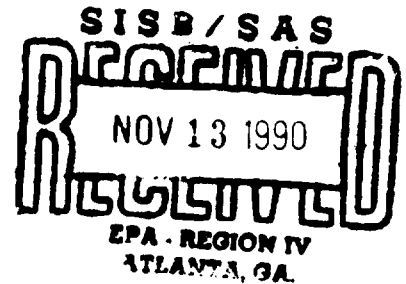
Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

cc:



INORGANIC DATA QUALIFIERS REPORT

Case Number: 14888

Project Number: 90-804

Site: Trident N. Landfill, Jedberg, SC

Element	Flag	Samples Affected	Reason
<u>Water</u>			
As, Be, Mn, Se, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ba, Ca, Cu, Fe, Mg, Na, Ni, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Hg	J	All	Matrix spike recovery = 74%
Se	J	All	Matrix spike recovery = 72.1%
Tl	J	All	Matrix spike recovery = 73.3%
Zn	J	All	Matrix duplicate RPD = 57.8%
Ba	J	All	Serial dilution percent difference = 11.6%
<u>Soil</u>			
As, Be, Mn, Se, V	U	All positives >IDL but <CRDL	Baseline instability
Al, Ba, Ca, Cu, Fe, Mg, Na, Ni, Zn	U	All positives >IDL but <10X contaminant level	Positives in Blanks
Sb	J R	All positives All negatives	Matrix spike recovery = 15.3%
As	J R	All positives All negatives	Matrix spike recovery = -9.3%
Cu	J	All	Matrix duplicate RPD = 54.7%
Se	J R	All positives All negatives	Matrix spike recovery = -90.5% Matrix duplicate RPD = 82.7%
V	J	All	Matrix spike recovery = 73.7% Matrix duplicate RPD = 67.5%
Fe	J	All	Matrix duplicate RPD = 36.1%
Ca	J	All	Serial dilution percent difference = 40.4%

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50185   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: PB-01   COLLECTION START: 09/17/90   0740   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.:   MD NO: X737   **
** ** ** **
```

RESULTS UNITS PARAMETER
10U UG/L CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50186   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: MW-01   COLLECTION START: 09/18/90   1500   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X746   MD NO: X746   **
** ** ** **
```

RESULTS UNITS PARAMETER
10U UG/L CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50187 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X753 MD NO: X753 **
**

RESULTS UNITS PARAMETER
10U UG/L CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50188   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: MW-03   COLLECTION START: 09/18/90   1200   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X754   MD NO: X754   **
** ** ** **
```

RESULTS UNITS PARAMETER
10U UG/L CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50189   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: MW-04   COLLECTION START: 09/18/90   1435   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X755   MD NO: X755   **
** ** ** **
```

RESULTS UNITS PARAMETER
10U UG/L CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50190   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: PW-01   COLLECTION START: 09/18/90   0920   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X751   MD NO: X751   **
** ** ** **
```

RESULTS UNITS PARAMETER
10U UG/L CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50191  SAMPLE TYPE: GROUNDWA  PROG ELEM: NSF  COLLECTED BY: M COHEN  **
** SOURCE: TRIDENT N. LANDFILL  CITY: JEDBERG  ST: SC  **
** STATION ID: PW-02  COLLECTION START: 09/18/90  1010  STOP: 00/00/00  **
** CASE.NO.: 14888  SAS NO.:  D. NO.: X752  MD NO: X752  **
** ** ** **
```

RESULTS UNITS PARAMETER
10U UG/L CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50195   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SS-01   COLLECTION START: 09/17/90   1100   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X740   MD NO: X740   **
** ** ** **
```

RESULTS UNITS PARAMETER
1U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50196  SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SS-02   COLLECTION START: 09/18/90  1120  STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X749   MD NO: X749   **
** ** ** **
```

RESULTS UNITS PARAMETER
1.1U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50197   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SS-03   COLLECTION START: 09/18/90   1200   STOP: 00/00/00   **
** CASE NO.: 14888   SAS NO.:   D. NO.: X756   MD NO: X756   **
** ** ** **
```

RESULTS UNITS PARAMETER
1.1U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** **
** PROJECT NO. 90-804   SAMPLE NO. 50198   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SS-04   COLLECTION START: 09/17/90   1020   STOP: 00/00/00   **
** CASE NO.: 14888   SAS NO.:   D. NO.: X738   MD NO: X738   **
**
*** **
```

RESULTS UNITS PARAMETER
1.2U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

11/05/90

```
*****  
** PROJECT NO. 90-804      SAMPLE NO. 50199   SAMPLE TYPE: SOIL    PROG ELEM: NSF     COLLECTED BY: M COHEN  
** SOURCE: TRIDENT N. LANDFILL                CITY: JEDBERG       ST: SC  
** STATION ID: SS-05          COLLECTION START: 09/17/90 1245 STOP: 00/00/00  
** CASE NO.: 14888           SAS NO.:         D. NO.: X743        MD NO: X743  
**  
*****
```

RESULTS	UNITS	PARAMETER
1.1U	MG/KG	CYANIDE

FOOTNOTES***
 *A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
***
** PROJECT NO. 90-804   SAMPLE NO. 50200   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-01   COLLECTION START: 09/17/90   1125   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X741   MD NO: X741   **
**
***
```

RESULTS UNITS PARAMETER
1.3U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
**  PROJECT NO. 90-804   SAMPLE NO. 50201  SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
**  SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
**  STATION ID: SB-02   COLLECTION START: 09/18/90  1135   STOP: 00/00/00   **
**  CASE.NO.: 14888   SAS NO.:   D. NO.: X750   MD NO: X750   **
**  ** ** ** **
```

RESULTS UNITS PARAMETER
1.2U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50202   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-03   COLLECTION START: 09/18/90   1225   STOP: 00/00/00   **
** CASE NO.: 14888   SAS NO.:   D. NO.: X866   MD NO: X866   **
** ** ** **
```

RESULTS UNITS PARAMETER
1.20U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50203  SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-04   COLLECTION START: 09/17/90  1035   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X739   MD NO: X739   **
** ** ** **
```

RESULTS UNITS PARAMETER
1.2U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50204   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-05   COLLECTION START: 09/17/90   1310   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X744   MD NO: X744   **
** ** ** **
```

RESULTS UNITS PARAMETER
1.3U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

11/05/90

```

*****
** PROJECT NO. 90-804      SAMPLE NO. 50205  SAMPLE TYPE: SOIL  PROG ELEM: NSF  COLLECTED BY: M COHEN
** SOURCE: TRIDENT N. LANDFILL                                CITY: JEDBERG      ST: SC
** STATION ID: SB-06      COLLECTION START: 09/18/90  1445  STOP: 00/00/00
** CASE NO.: 14888      SAS NO.:      D. NO.: X867      MD NO: X867
**
*****

```

RESULTS	UNITS	PARAMETER
20	MG/KG	CYANIDE

FOOTNOTES
 *A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
**  PROJECT NO. 90-804   SAMPLE NO. 50206  SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
**  SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
**  STATION ID: SD-01   COLLECTION START: 09/17/90  1555  STOP: 00/00/00   **
**  CASE.NO.: 14888   SAS NO.:   D. NO.: X748   MD NO: X748   **
**  ** ** **
```

RESULTS UNITS PARAMETER
1.3U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

11/05/90

```

*****
** PROJECT NO. 90-804      SAMPLE NO. 50207  SAMPLE TYPE: SOIL      PROG ELEM: NSF      COLLECTED BY: M. COHEN      **
** SOURCE: TRIDENT N. LANDFILL                                CITY: JEDBERG      ST: SC      **
** STATION ID: SD-02      COLLECTION START: 09/17/90  1535  STOP: 00/00/00      **
** CASE NO.: 14888      SAS NO.:      D. NO.: X747      MD NO: X747      **
**
*****

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FOOTNOTES
 *A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50208 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SD-03 COLLECTION START: 09/17/90 1200 STOP: 00/00/00 **
** CASE.NO.: 14888 SAS NO.: D. NO.: X745 MD NO: X745 **
** ** ** **
```

RESULTS UNITS PARAMETER
1.4U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/05/90

SPECIFIED ANALYSIS DATA REPORT

```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50209  SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SD-04   COLLECTION START: 09/17/90  1135   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X742   MD NO: X742   **
** ** ** **
```

RESULTS UNITS PARAMETER
1.3U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SITE TRIDENT NORTH LF (FIT)
PROJECT # 90-804

STATE SC

MANAGER ROGER FRANKLIN (NUS)
SHIPWEEK 09/17/90

SOILVOA BOOKED	11	DATA RECEIVED	11/19/90	FOR	16	SAMPLES
H2OVOA BOOKED	7	DATA RECEIVED	11/19/90	FOR	7	SAMPLES
SOILEXT BOOKED	10	DATA RECEIVED	11/19/90	FOR	15	SAMPLES
H2OEXT BOOKED	7	DATA RECEIVED	11/19/90	FOR	7	SAMPLES
SOILPEST BOOKED	10	DATA RECEIVED	11/19/90	FOR	15	SAMPLES
H2OPEST BOOKED	7	DATA RECEIVED	11/19/90	FOR	7	SAMPLES
SOILMET BOOKED	10	DATA RECEIVED	11/13/90	FOR	15	SAMPLES
H2OMET BOOKED	7	DATA RECEIVED	11/13/90	FOR	7	SAMPLES
SOILCN BOOKED	10	DATA RECEIVED	11/13/90	FOR	15	SAMPLES
H2OCN BOOKED	7	DATA RECEIVED	11/13/90	FOR	7	SAMPLES

SOILOTH1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
SOILOTH2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H200TH1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H200TH2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
OTHER1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
OTHER2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES

OV REQUESTED? N

LAB(CLP/ESD) CLP

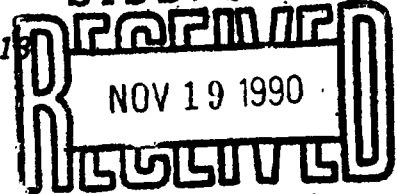
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region IV

Environmental Services Division

College Station Road, Athens, Ga. 30619

SISB/SAS



EPA - REGION IV
ATLANTA, GA.

*****MEMORANDUM*****

DATE: 11/07/90

SUBJECT: Results of Purgeable Organic Analysis;
90-804 TRIDENT N. LANDFILL
JEDBERG SC
CASE NO: 14888

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 14888 Project Number 90-804 SAS Number

Site ID. Trident N. Landfill, Jedberg, SC.

<u>Affected Samples</u>	<u>Compound or Fraction</u>	<u>Flag Used</u>	<u>Reason</u>
<u>Volatiles</u>			
DX753,738,740,741, 744,750,867	all positives	J	<quantitation limit
<u>Extractables</u>			
all soil samples	1,2,4-trichlorobenzene	J	low recovery QC spike
	2,4-dimethylphenol	R	unacceptable recovery QC spike
all samples	3-nitroaniline	R	unacceptable QC spike recovery
all water samples	di-n-butylphthalate	R	unacceptable QC spike recovery
DX740,744	butylbenzylphthalate	J	<quantitation limit
DX740,741,744	all extractables except 2,4-dimethylphenol and 3-nitroaniline	J	excessive holding time
DX755	all extractables except 3-nitroaniline and di-n-butylphthalate	J	exceeded 40CFR136 extraction holding time
DX738	di-n-octylphthalate	J	internal standard low
	benzo(b/k)fluoranthene	J	internal standard low
	benzo(a)pyrene	J	internal standard low
	indeno(1,2,3-cd)pyrene	J	internal standard low
	dibenz(a,h)anthracene	J	internal standard low
	benzo(g,h,i)perylene	J	internal standard low
DX747	di-n-octylphthalate	R	internal standard unacceptable
	benzo(b/k)fluoranthene	R	internal standard unacceptable
	benzo(a)pyrene	R	internal standard unacceptable
	indeno(1,2,3-cd)pyrene	R	internal standard unacceptable
	dibenz(a,h)anthracene	R	internal standard unacceptable
	benzo(g,h,i)perylene	R	internal standard unacceptable
<u>Pesticides</u>			
all samples	beta-BHC	R	unacceptable QC recovery
all waters	heptachlor	J	low QC spike recovery
	DDE and DDD	J	low QC spike recovery

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50186 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-01 COLLECTION START: 09/18/90 1500 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X746 **
*** **

UG/L ANALYTICAL RESULTS

10 U CHLOROMETHANE
10 U BROMOMETHANE
10 U VINYL CHLORIDE
10 U CHLOROETHANE
5 U METHYLENE CHLORIDE
10 U ACETONE
5 U CARBON DISULFIDE
5 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5 U 1,1-DICHLOROETHANE
5 U 1,2-DICHLOROETHENE (TOTAL)
5 U CHLOROFORM
5 U 1,2-DICHLOROETHANE
10 U METHYL ETHYL KETONE
5 U 1,1,1-TRICHLOROETHANE
5 U CARBON TETRACHLORIDE
10 U VINYL ACETATE
5 U BROMODICHLOROMETHANE

UG/L ANALYTICAL RESULTS

5 U 1,2-DICHLOROPROPANE
5 U CIS-1,3-DICHLOROPROPENE
5 U TRICHLOROETHENE(TRICHLOROETHYLENE)
5 U DIBROMOCHLOROMETHANE
5 U 1,1,2-TRICHLOROETHANE
5 U BENZENE
5 U TRANS-1,3-DICHLOROPROPENE
5 U BROMOFORM
10 U METHYL ISOBUTYL KETONE
10 U METHYL BUTYL KETONE
5 U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5 U 1,1,2,2-TETRACHLOROETHANE
5 U TOLUENE
5 U CHLOROBENZENE
5 U ETHYL BENZENE
5 U STYRENE
5 U TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50187 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X753 **
*** **

UG/L ANALYTICAL RESULTS

10 U CHLOROMETHANE
10 U BROMOMETHANE
10 U VINYL CHLORIDE
10 U CHLOROETHANE
5 U METHYLENE CHLORIDE
10U ACETONE
2 J CARBON DISULFIDE
5 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5 U 1,1-DICHLOROETHANE
5 U 1,2-DICHLOROETHENE (TOTAL)
5 U CHLOROFORM
5 U 1,2-DICHLOROETHANE
10 U METHYL ETHYL KETONE
5 U 1,1,1-TRICHLOROETHANE
5 U CARBON TETRACHLORIDE
10 U VINYL ACETATE
5 U BROMODICHLOROMETHANE

UG/L ANALYTICAL RESULTS

5 U 1,2-DICHLOROPROPANE
5 U CIS-1,3-DICHLOROPROPENE
5 U TRICHLOROETHENE(TRICHLOROETHYLENE)
5 U DIBROMOCHLOROMETHANE
5 U 1,1,2-TRICHLOROETHANE
5 U BENZENE
5 U TRANS-1,3-DICHLOROPROPENE
5 U BROMOFORM
10 U METHYL ISOBUTYL KETONE
10 U METHYL BUTYL KETONE
5 U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5 U 1,1,2,2-TETRACHLOROETHANE
5 U TOLUENE
5 U CHLOROBENZENE
5 U ETHYL BENZENE
5 U STYRENE
5 U TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** ** ** ** **
 ** PROJECT NO. 90-804 SAMPLE NO. 50188 SAMPLE TYPE: PROG ELEM: NSF COLLECTED BY: M COHEN **
 ** SOURCE: CITY: JEDBERG ST: SC **
 ** STATION ID: MW-03 COLLECTION START: 09/18/90 1200 STOP: 00/00/00 **
 **
 ** CASE NO.: 14888 SAS NO.: D. NO.: X754 **
 *** ** ** *****

UG/L ANALYTICAL RESULTS
 10 U CHLOROMETHANE
 10 U BROMOMETHANE
 10 U VINYL CHLORIDE
 10 U CHLOROETHANE
 5 U METHYLENE CHLORIDE
 10 U ACETONE
 5 U CARBON DISULFIDE
 5 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
 5 U 1,1-DICHLOROETHANE
 5 U 1,2-DICHLOROETHENE (TOTAL)
 5 U CHLOROFORM
 5 U 1,2-DICHLOROETHANE
 10 U METHYL ETHYL KETONE
 5 U 1,1,1-TRICHLOROETHANE
 5 U CARBON TETRACHLORIDE
 10 U VINYL ACETATE
 5 U BROMODICHLOROMETHANE

UG/L ANALYTICAL RESULTS
 5 U 1,2-DICHLOROPROPANE
 5 U CIS-1,3-DICHLOROPROPENE
 5 U TRICHLOROETHENE(TRICHLOROETHYLENE)
 5 U DIBROMOCHLOROMETHANE
 5 U 1,1,2-TRICHLOROETHANE
 5 U BENZENE
 5 U TRANS-1,3-DICHLOROPROPENE
 5 U BROMOFORM
 10 U METHYL ISOBUTYL KETONE
 10 U METHYL BUTYL KETONE
 5 U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
 5 U 1,1,2,2-TETRACHLOROETHANE
 5 U TOLUENE
 5 U CHLOROBENZENE
 5 U ETHYL BENZENE
 5 U STYRENE
 5 U TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
 *R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** ** ** ** **
 ** PROJECT NO. 90-804 SAMPLE NO. 50189 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
 ** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
 ** STATION ID: MW-04 COLLECTION START: 09/18/90 1435 STOP: 00/00/00 **
 **
 ** CASE NO.: 14888 SAS NO.: D. NO.: X755 **
 *** ** ** ** **

UG/L ANALYTICAL RESULTS

10 U CHLOROMETHANE
 10 U BROMOMETHANE
 10 U VINYL CHLORIDE
 10 U CHLOROETHANE
 5 U METHYLENE CHLORIDE
 10 U ACETONE
 5 U CARBON DISULFIDE
 5 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
 5 U 1,1-DICHLOROETHANE
 5 U 1,2-DICHLOROETHENE (TOTAL)
 5 U CHLOROFORM
 5 U 1,2-DICHLOROETHANE
 10 U METHYL ETHYL KETONE
 5 U 1,1,1-TRICHLOROETHANE
 5 U CARBON TETRACHLORIDE
 10 U VINYL ACETATE
 5 U BROMODICHLOROMETHANE

UG/L ANALYTICAL RESULTS

5 U 1,2-DICHLOROPROPANE
 5 U CIS-1,3-DICHLOROPROPENE
 5 U TRICHLOROETHENE (TRICHLOROETHYLENE)
 5 U DIBROMOCHLOROMETHANE
 5 U 1,1,2-TRICHLOROETHANE
 5 U BENZENE
 5 U TRANS-1,3-DICHLOROPROPENE
 5 U BROMOFORM
 10 U METHYL ISOBUTYL KETONE
 10 U METHYL BUTYL KETONE
 5 U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
 5 U 1,1,2,2-TETRACHLOROETHANE
 5 U TOLUENE
 5 U CHLOROBENZENE
 5 U ETHYL BENZENE
 5 U STYRENE
 5 U TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
 *R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50190   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: PW-01   COLLECTION START: 09/18/90   0920   STOP: 00/00/00   **
**
** CASE NO.: 14888   SAS NO.:   D. NO.: X751   **
*** ** ** ** *
  
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UG/L   ANALYTICAL RESULTS
10 U   CHLOROMETHANE
10 U   BROMOMETHANE
10 U   VINYL CHLORIDE
10 U   CHLOROETHANE
5 U    METHYLENE CHLORIDE
10 U   ACETONE
5 U    CARBON DISULFIDE
5 U    1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)
5 U    1,1-DICHLOROETHANE
5 U    1,2-DICHLOROETHENE (TOTAL)
5 U    CHLOROFORM
5 U    1,2-DICHLOROETHANE
10 U   METHYL ETHYL KETONE
5 U    1,1,1-TRICHLOROETHANE
5 U    CARBON TETRACHLORIDE
10 U   VINYL ACETATE
5 U    BROMODICHLOROMETHANE
  
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UG/L   ANALYTICAL RESULTS
5 U    1,2-DICHLOROPROPANE
5 U    CIS-1,3-DICHLOROPROPENE
5 U    TRICHLOROETHENE (TRICHLOROETHYLENE)
5 U    DIBROMOCHLOROMETHANE
5 U    1,1,2-TRICHLOROETHANE
5 U    BENZENE
5 U    TRANS-1,3-DICHLOROPROPENE
5 U    BROMOFORM
10 U   METHYL ISOBUTYL KETONE
10 U   METHYL BUTYL KETONE
5 U    TETRACHLOROETHENE (TETRACHLOROETHYLENE)
5 U    1,1,2,2-TETRACHLOROETHANE
5 U    TOLUENE
5 U    CHLOROBENZENE
5 U    ETHYL BENZENE
5 U    STYRENE
5 U    TOTAL XYLENES
  
```

REMARKS

REMARKS

FOOTNOTES

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*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50191   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: PW-02   COLLECTION START: 09/18/90   1010   STOP: 00/00/00   **
**
** CASE NO.: 14888   SAS NO.:   D. NO.: X752   **
*** **
  
```

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UG/L   ANALYTICAL RESULTS
10 U   CHLOROMETHANE
10 U   BROMOMETHANE
10 U   VINYL CHLORIDE
10 U   CHLOROETHANE
5 U   METHYLENE CHLORIDE
10 U   ACETONE
5 U   CARBON DISULFIDE
5 U   1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5 U   1,1-DICHLOROETHANE
5 U   1,2-DICHLOROETHENE (TOTAL)
5 U   CHLOROFORM
5 U   1,2-DICHLOROETHANE
10 U   METHYL ETHYL KETONE
5 U   1,1,1-TRICHLOROETHANE
5 U   CARBON TETRACHLORIDE
10 U   VINYL ACETATE
5 U   BROMODICHLOROMETHANE
  
```

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UG/L   ANALYTICAL RESULTS
5 U   1,2-DICHLOROPROPANE
5 U   CIS-1,3-DICHLOROPROPENE
5 U   TRICHLOROETHENE(TRICHLOROETHYLENE)
5 U   DIBROMOCHLOROMETHANE
5 U   1,1,2-TRICHLOROETHANE
5 U   BENZENE
5 U   TRANS-1,3-DICHLOROPROPENE
5 U   BROMOFORM
10 U   METHYL ISOBUTYL KETONE
10 U   METHYL BUTYL KETONE
5 U   TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5 U   1,1,2,2-TETRACHLOROETHANE
5 U   TOLUENE
5 U   CHLOROBENZENE
5 U   ETHYL BENZENE
5 U   STYRENE
5 U   TOTAL XYLENES
  
```

REMARKS

REMARKS

FOOTNOTES

```

*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
  
```


SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50195 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SS-01 COLLECTION START: 09/17/90 1100 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X740 **
*** ** ** ** *

UG/KG ANALYTICAL RESULTS
11 U CHLOROMETHANE
11 U BROMOMETHANE
11 U VINYL CHLORIDE
11 U CHLOROETHANE
7U METHYLENE CHLORIDE
11 U ACETONE
5 U CARBON DISULFIDE
5 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5 U 1,1-DICHLOROETHANE
5 U 1,2-DICHLOROETHENE (TOTAL)
5 U CHLOROFORM
5 U 1,2-DICHLOROETHANE
11 U METHYL ETHYL KETONE
5 U 1,1,1-TRICHLOROETHANE
5 U CARBON TETRACHLORIDE
11 U VINYL ACETATE
5 U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS
5 U 1,2-DICHLOROPROPANE
5 U CIS-1,3-DICHLOROPROPENE
5 U TRICHLOROETHENE (TRICHLOROETHYLENE)
5 U DIBROMOCHLOROMETHANE
5 U 1,1,2-TRICHLOROETHANE
5 U BENZENE
5 U TRANS-1,3-DICHLOROPROPENE
5 U BROMOFORM
11 U METHYL ISOBUTYL KETONE
11 U METHYL BUTYL KETONE
2 J TETRACHLOROETHENE (TETRACHLOROETHYLENE)
5 U 1,1,2,2-TETRACHLOROETHANE
5 U TOLUENE
5 U CHLOROBENZENE
5 U ETHYL BENZENE
5 U STYRENE
5 U TOTAL XYLENES
6 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** ** ** ** **
 ** PROJECT NO. 90-804 SAMPLE NO. 50196 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
 ** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
 ** STATION ID: SS-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
 **
 ** CASE NO.: 14888 SAS NO.: D. NO.: X749 **
 *** ** ** ** **

UG/KG ANALYTICAL RESULTS

11 U	CHLOROMETHANE
11 U	BROMOMETHANE
11 U	VINYL CHLORIDE
11 U	CHLOROETHANE
6U	METHYLENE CHLORIDE
11 U	ACETONE
6 U	CARBON DISULFIDE
6 U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
6 U	1,1-DICHLOROETHANE
6 U	1,2-DICHLOROETHENE (TOTAL)
6 U	CHLOROFORM
6 U	1,2-DICHLOROETHANE
11 U	METHYL ETHYL KETONE
6 U	1,1,1-TRICHLOROETHANE
6 U	CARBON TETRACHLORIDE
11 U	VINYL ACETATE
6 U	BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

6 U	1,2-DICHLOROPROPANE
6 U	CIS-1,3-DICHLOROPROPENE
6 U	TRICHLOROETHENE (TRICHLOROETHYLENE)
6 U	DIBROMOCHLOROMETHANE
6 U	1,1,2-TRICHLOROETHANE
6 U	BENZENE
6 U	TRANS-1,3-DICHLOROPROPENE
6 U	BROMOFORM
11 U	METHYL ISOBUTYL KETONE
11 U	METHYL BUTYL KETONE
23	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
6 U	1,1,2,2-TETRACHLOROETHANE
6 U	TOLUENE
6 U	CHLOROBENZENE
6 U	ETHYL BENZENE
6 U	STYRENE
6 U	TOTAL XYLENES
10	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
 *R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50197 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: CITY: JEDBERG ST: SC **
** STATION ID: SS-03 COLLECTION START: 09/18/90 1200 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X756 **
*** **

UG/KG ANALYTICAL RESULTS

11 U	CHLOROMETHANE
11 U	BROMOMETHANE
11 U	VINYL CHLORIDE
11 U	CHLOROETHANE
7U	METHYLENE CHLORIDE
11 U	ACETONE
6 U	CARBON DISULFIDE
6 U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
6 U	1,1-DICHLOROETHANE
6 U	1,2-DICHLOROETHENE (TOTAL)
6 U	CHLOROFORM
6 U	1,2-DICHLOROETHANE
11 U	METHYL ETHYL KETONE
6 U	1,1,1-TRICHLOROETHANE
6 U	CARBON TETRACHLORIDE
11 U	VINYL ACETATE
6 U	BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

6 U	1,2-DICHLOROPROPANE
6 U	CIS-1,3-DICHLOROPROPENE
6 U	TRICHLOROETHENE(TRICHLOROETHYLENE)
6 U	DIBROMOCHLOROMETHANE
6 U	1,1,2-TRICHLOROETHANE
6 U	BENZENE
6 U	TRANS-1,3-DICHLOROPROPENE
6 U	BROMOFORM
11 U	METHYL ISOBUTYL KETONE
11 U	METHYL BUTYL KETONE
11	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
6 U	1,1,2,2-TETRACHLOROETHANE
6 U	TOLUENE
6 U	CHLOROBENZENE
6 U	ETHYL BENZENE
6 U	STYRENE
6 U	TOTAL XYLENES
11	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50198  SAMPLE TYPE: SOIL  PROG ELEM: NSF  COLLECTED BY: M COHEN  **
** SOURCE: TRIDENT N. LANDFILL  CITY: JEDBERG  ST: SC  **
** STATION ID: SS-04  COLLECTION START: 09/17/90  1020  STOP: 00/00/00  **
**
** CASE NO.: 14888  SAS NO.:  D. NO.: X738  **
*** ** ** ** *
  
```

UG/KG ANALYTICAL RESULTS

```

12 U CHLOROMETHANE
12 U BROMOMETHANE
12 U VINYL CHLORIDE
12 U CHLOROETHANE
6U METHYLENE CHLORIDE
12 U ACETONE
6 U CARBON DISULFIDE
6 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
6 U 1,1-DICHLOROETHANE
6 U 1,2-DICHLOROETHENE (TOTAL)
6 U CHLOROFORM
6 U 1,2-DICHLOROETHANE
12 U METHYL ETHYL KETONE
6 U 1,1,1-TRICHLOROETHANE
6 U CARBON TETRACHLORIDE
12 U VINYL ACETATE
6 U BROMODICHLOROMETHANE
  
```

UG/KG ANALYTICAL RESULTS

```

6 U 1,2-DICHLOROPROPANE
6 U CIS-1,3-DICHLOROPROPENE
6 U TRICHLOROETHENE(TRICHLOROETHYLENE)
6 U DIBROMOCHLOROMETHANE
6 U 1,1,2-TRICHLOROETHANE
6 U BENZENE
6 U TRANS-1,3-DICHLOROPROPENE
6 U BROMOFORM
12 U METHYL ISOBUTYL KETONE
12 U METHYL BUTYL KETONE
1 J TETRACHLOROETHENE(TETRACHLOROETHYLENE)
6 U 1,1,2,2-TETRACHLOROETHANE
6 U TOLUENE
6 U CHLOROBENZENE
6 U ETHYL BENZENE
6 U STYRENE
6 U TOTAL XYLENES
15 PERCENT MOISTURE
  
```

REMARKS

REMARKS

FOOTNOTES

```

*A-AVERAGE VALUE  *NA-NOT ANALYZED  *NAI-INTERFERENCES  *J-ESTIMATED VALUE  *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
  
```


11/06/90

```
** ** * PROJECT NO. 90-804      SAMPLE NO. 50199   SAMPLE TYPE: SOIL    PROG ELEM: NSF     COLLECTED BY: M COHEN    **
```

```
** SOURCE:                      CITY: JEDBERG       ST: SC                **
```

```
** STATION ID: SS-05           COLLECTION START: 09/17/90  1245 STOP: 00/00/00    **
```

```
**                                **
```

```
** CASE NO.: 14888              SAS NO.:          D. NO.: X743                    **
```

UG/KG	ANALYTICAL RESULTS
100	100
200	200
300	300
400	400
500	500
600	600
700	700
800	800
900	900
1000	1000

```

6 U 1,2-DICHLOROPROPANE
6 U CIS-1,3-DICHLOROPROPENE
6 U TRICHLOROETHENE (TRICHLOROETHYLENE)
6 U DIBROMOCHLOROMETHANE
6 U 1,1,2-TRICHLOROETHANE
6 U BENZENE
6 U TRANS-1,3-DICHLOROPROPENE
6 U BROMOFORM
11 U METHYL ISOBUTYL KETONE
11 U METHYL BUTYL KETONE
6 U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
6 U 1,1,2,2-TETRACHLOROETHANE
6 U TOLUENE
6 U CHLOROBENZENE
6 U ETHYL BENZENE
6 U STYRENE
6 U TOTAL XYLENES
9 PERCENT MOISTURE

```

REMARKS

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** ** ** ** **
 ** PROJECT NO. 90-804 SAMPLE NO. 50200 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
 ** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
 ** STATION ID: SB-01 COLLECTION START: 09/17/90 1125 STOP: 00/00/00 **
 **
 ** CASE NO.: 14888 SAS NO.: D. NO.: X741 **
 *** ** ** ** *

UG/KG ANALYTICAL RESULTS
 13 U CHLOROMETHANE
 13 U BROMOMETHANE
 13 U VINYL CHLORIDE
 13 U CHLOROETHANE
 20U METHYLENE CHLORIDE
 13 U ACETONE
 7 U CARBON DISULFIDE
 7 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
 7 U 1,1-DICHLOROETHANE
 7 U 1,2-DICHLOROETHENE (TOTAL)
 7 U CHLOROFORM
 7 U 1,2-DICHLOROETHANE
 13 U METHYL ETHYL KETONE
 7 U 1,1,1-TRICHLOROETHANE
 7 U CARBON TETRACHLORIDE
 13 U VINYL ACETATE
 7 U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS
 7 U 1,2-DICHLOROPROPANE
 7 U CIS-1,3-DICHLOROPROPENE
 7 U TRICHLOROETHENE(TRICHLOROETHYLENE)
 7 U DIBROMOCHLOROMETHANE
 7 U 1,1,2-TRICHLOROETHANE
 7 U BENZENE
 7 U TRANS-1,3-DICHLOROPROPENE
 7 U BROMOFORM
 13 U METHYL ISOBUTYL KETONE
 13 U METHYL BUTYL KETONE
 5 J TETRACHLOROETHENE(TETRACHLOROETHYLENE)
 7 U 1,1,2,2-TETRACHLOROETHANE
 4 J TOLUENE
 7 U CHLOROBENZENE
 7 U ETHYL BENZENE
 7 U STYRENE
 7 U TOTAL XYLENES
 24 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** ** ** ** **
 ** PROJECT NO. 90-804 SAMPLE NO. 50201 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
 ** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
 ** STATION ID: SB-02 COLLECTION START: 09/18/90 1135 STOP: 00/00/00 **
 **
 ** CASE NO.: 14888 SAS NO.: D. NO.: X750 **
 *** ** ** ** **

UG/KG ANALYTICAL RESULTS

12 U	CHLOROMETHANE
12 U	BROMOMETHANE
12 U	VINYL CHLORIDE
12 U	CHLOROETHANE
7U	METHYLENE CHLORIDE
12 U	ACETONE
6 U	CARBON DISULFIDE
6 U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
6 U	1,1-DICHLOROETHANE
6 U	1,2-DICHLOROETHENE (TOTAL)
6 U	CHLOROFORM
6 U	1,2-DICHLOROETHANE
12 U	METHYL ETHYL KETONE
6 U	1,1,1-TRICHLOROETHANE
6 U	CARBON TETRACHLORIDE
12 U	VINYL ACETATE
6 U	BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

6 U	1,2-DICHLOROPROPANE
6 U	CIS-1,3-DICHLOROPROPENE
6 U	TRICHLOROETHENE(TRICHLOROETHYLENE)
6 U	DIBROMOCHLOROMETHANE
6 U	1,1,2-TRICHLOROETHANE
6 U	BENZENE
6 U	TRANS-1,3-DICHLOROPROPENE
6 U	BROMOFORM
12 U	METHYL ISOBUTYL KETONE
12 U	METHYL BUTYL KETONE
6 U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
6 U	1,1,2,2-TETRACHLOROETHANE
6 U	TOLUENE
6 U	CHLOROBENZENE
2 J	ETHYL BENZENE
6 U	STYRENE
6 U	TOTAL XYLENES
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
 *R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50202 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-03 COLLECTION START: 09/18/90 1225 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X866 **
*** ** ** ** * * * * *

UG/KG ANALYTICAL RESULTS

12 U CHLOROMETHANE
12 U BROMOMETHANE
12 U VINYL CHLORIDE
12 U CHLOROETHANE
7U METHYLENE CHLORIDE
12 U ACETONE
6 U CARBON DISULFIDE
6 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
6 U 1,1-DICHLOROETHANE
6 U 1,2-DICHLOROETHENE (TOTAL)
6 U CHLOROFORM
6 U 1,2-DICHLOROETHANE
12 U METHYL ETHYL KETONE
6 U 1,1,1-TRICHLOROETHANE
6 U CARBON TETRACHLORIDE
12 U VINYL ACETATE
6 U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

6 U 1,2-DICHLOROPROPANE
6 U CIS-1,3-DICHLOROPROPENE
6 U TRICHLOROETHENE(TRICHLOROETHYLENE)
6 U DIBROMOCHLOROMETHANE
6 U 1,1,2-TRICHLOROETHANE
6 U BENZENE
6 U TRANS-1,3-DICHLOROPROPENE
6 U BROMOFORM
12 U METHYL ISOBUTYL KETONE
12 U METHYL BUTYL KETONE
6 U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
6 U 1,1,2,2-TETRACHLOROETHANE
6 U TOLUENE
6 U CHLOROBENZENE
6 U ETHYL BENZENE
6 U STYRENE
6 U TOTAL XYLENES
15 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50203   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-04   COLLECTION START: 09/17/90   1035   STOP: 00/00/00   **
**
** CASE NO.: 14888   SAS NO.:   D. NO.: X739   **
*** ** ** ** *
  
```

UG/KG ANALYTICAL RESULTS

```

13 U CHLOROMETHANE
13 U BROMOMETHANE
13 U VINYL CHLORIDE
13 U CHLOROETHANE
20U METHYLENE CHLORIDE
100U ACETONE
6 U CARBON DISULFIDE
6 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
6 U 1,1-DICHLOROETHANE
6 U 1,2-DICHLOROETHENE (TOTAL)
6 U CHLOROFORM
6 U 1,2-DICHLOROETHANE
13 U METHYL ETHYL KETONE
6 U 1,1,1-TRICHLOROETHANE
6 U CARBON TETRACHLORIDE
13 U VINYL ACETATE
6 U BROMODICHLOROMETHANE
  
```

UG/KG ANALYTICAL RESULTS

```

6 U 1,2-DICHLOROPROPANE
6 U CIS-1,3-DICHLOROPROPENE
6 U TRICHLOROETHENE(TRICHLOROETHYLENE)
6 U DIBROMOCHLOROMETHANE
6 U 1,1,2-TRICHLOROETHANE
6 U BENZENE
6 U TRANS-1,3-DICHLOROPROPENE
6 U BROMOFORM
13 U METHYL ISOBUTYL KETONE
13 U METHYL BUTYL KETONE
6 U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
6 U 1,1,2,2-TETRACHLOROETHANE
6 U TOLUENE
6 U CHLOROBENZENE
6 U ETHYL BENZENE
6 U STYRENE
6 U TOTAL XYLENES
20 PERCENT MOISTURE
  
```

REMARKS

REMARKS

FOOTNOTES

```

*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
  
```


SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

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*** * * * *
** PROJECT NO. 90-804   SAMPLE NO. 50204   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE:                                     CITY: JEDBERG   ST: SC   **
** STATION ID: SB-05   COLLECTION START: 09/17/90   1310   STOP: 00/00/00   **
**
** CASE NO.: 14888   SAS NO.:   D. NO.: X744   **
*** * * * *
  
```

```

UG/KG   ANALYTICAL RESULTS
14 U   CHLOROMETHANE
14 U   BROMOMETHANE
14 U   VINYL CHLORIDE
14 U   CHLOROETHANE
8U     METHYLENE CHLORIDE
14 U   ACETONE
7 U   CARBON DISULFIDE
7 U   1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
7 U   1,1-DICHLOROETHANE
7 U   1,2-DICHLOROETHENE (TOTAL)
7 U   CHLOROFORM
7 U   1,2-DICHLOROETHANE
20U   METHYL ETHYL KETONE
7 U   1,1,1-TRICHLOROETHANE
7 U   CARBON TETRACHLORIDE
14 U   VINYL ACETATE
7 U   BROMODICHLOROMETHANE
  
```

```

UG/KG   ANALYTICAL RESULTS
7 U   1,2-DICHLOROPROPANE
7 U   CIS-1,3-DICHLOROPROPENE
7 U   TRICHLOROETHENE (TRICHLOROETHYLENE)
7 U   DIBROMOCHLOROMETHANE
7 U   1,1,2-TRICHLOROETHANE
7 U   BENZENE
7 U   TRANS-1,3-DICHLOROPROPENE
7 U   BROMOFORM
14 U   METHYL ISOBUTYL KETONE
14 U   METHYL BUTYL KETONE
3 J   TETRACHLOROETHENE (TETRACHLOROETHYLENE)
7 U   1,1,2,2-TETRACHLOROETHANE
7 U   TOLUENE
7 U   CHLOROBENZENE
7 U   ETHYL BENZENE
7 U   STYRENE
7 U   TOTAL XYLENES
27   PERCENT MOISTURE
  
```

REMARKS

REMARKS

FOOTNOTES

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*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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```


SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50205   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-06   COLLECTION START: 09/18/90   1445   STOP: 00/00/00   **
**
** CASE NO.: 14888   SAS NO.:   D. NO.: X867   **
*** ** ** ** *
  
```

```

UG/KG      ANALYTICAL RESULTS
12 U  CHLOROMETHANE
12 U  BROMOMETHANE
12 U  VINYL CHLORIDE
12 U  CHLOROETHANE
  9U  METHYLENE CHLORIDE
12 U  ACETONE
  6 U  CARBON DISULFIDE
  6 U  1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
  6 U  1,1-DICHLOROETHANE
  6 U  1,2-DICHLOROETHENE (TOTAL)
  6 U  CHLOROFORM
  6 U  1,2-DICHLOROETHANE
12 U  METHYL ETHYL KETONE
  6 U  1,1,1-TRICHLOROETHANE
  6 U  CARBON TETRACHLORIDE
12 U  VINYL ACETATE
  6 U  BROMODICHLOROMETHANE
  
```

```

UG/KG      ANALYTICAL RESULTS
  6 U  1,2-DICHLOROPROPANE
  6 U  CIS-1,3-DICHLOROPROPENE
  6 U  TRICHLOROETHENE (TRICHLOROETHYLENE)
  6 U  DIBROMOCHLOROMETHANE
  6 U  1,1,2-TRICHLOROETHANE
  6 U  BENZENE
  6 U  TRANS-1,3-DICHLOROPROPENE
  6 U  BROMOFORM
12 U  METHYL ISOBUTYL KETONE
12 U  METHYL BUTYL KETONE
  6 J  TETRACHLOROETHENE (TETRACHLOROETHYLENE)
  6 U  1,1,2,2-TETRACHLOROETHANE
  6 U  TOLUENE
  6 U  CHLOROBENZENE
  6 U  ETHYL BENZENE
  6 U  STYRENE
  6 U  TOTAL XYLENES
  19  PERCENT MOISTURE
  
```

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
 *R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50206 SAMPLE TYPE: PROG ELEM: NSF COLLECTED BY: M. COHEN **
** SOURCE: CITY: JEDBERG ST: SC **
** STATION ID: SD-01 COLLECTION START: 09/17/90 1555 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X748 **

UG/KG ANALYTICAL RESULTS

13 U CHLOROMETHANE
13 U BROMOMETHANE
13 U VINYL CHLORIDE
13 U CHLOROETHANE
7 U METHYLENE CHLORIDE
13 U ACETONE
7 U CARBON DISULFIDE
7 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
7 U 1,1-DICHLOROETHANE
7 U 1,2-DICHLOROETHENE (TOTAL)
7 U CHLOROFORM
7 U 1,2-DICHLOROETHANE
13 U METHYL ETHYL KETONE
7 U 1,1,1-TRICHLOROETHANE
7 U CARBON TETRACHLORIDE
13 U VINYL ACETATE
7 U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

7 U 1,2-DICHLOROPROPANE
7 U CIS-1,3-DICHLOROPROPENE
7 U TRICHLOROETHENE (TRICHLOROETHYLENE)
7 U DIBROMOCHLOROMETHANE
7 U 1,1,2-TRICHLOROETHANE
7 U BENZENE
7 U TRANS-1,3-DICHLOROPROPENE
7 U BROMOFORM
13 U METHYL ISOBUTYL KETONE
13 U METHYL BUTYL KETONE
7 U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
7 U 1,1,2,2-TETRACHLOROETHANE
7 U TOLUENE
7 U CHLOROBENZENE
7 U ETHYL BENZENE
7 U STYRENE
7 U TOTAL XYLENES
25 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50207   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SD-02   COLLECTION START: 09/17/90   1535   STOP: 00/00/00   **
** CASE NO.: 14888   SAS NO.:   D. NO.: X747   **
*** **

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UG/KG   ANALYTICAL RESULTS
12 U   CHLOROMETHANE
12 U   BROMOMETHANE
12 U   VINYL CHLORIDE
12 U   CHLOROETHANE
6U     METHYLENE CHLORIDE
12 U   ACETONE
6 U   CARBON DISULFIDE
6 U   1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
6 U   1,1-DICHLOROETHANE
6 U   1,2-DICHLOROETHENE (TOTAL)
6 U   CHLOROFORM
6 U   1,2-DICHLOROETHANE
12 U   METHYL ETHYL KETONE
6 U   1,1,1-TRICHLOROETHANE
6 U   CARBON TETRACHLORIDE
12 U   VINYL ACETATE
6 U   BROMODICHLOROMETHANE

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UG/KG   ANALYTICAL RESULTS
6 U   1,2-DICHLOROPROPANE
6 U   CIS-1,3-DICHLOROPROPENE
6 U   TRICHLOROETHENE(TRICHLOROETHYLENE)
6 U   DIBROMOCHLOROMETHANE
6 U   1,1,2-TRICHLOROETHANE
6 U   BENZENE
6 U   TRANS-1,3-DICHLOROPROPENE
6 U   BROMOFORM
12 U   METHYL ISOBUTYL KETONE
12 U   METHYL BUTYL KETONE
6 U   TETRACHLOROETHENE(TETRACHLOROETHYLENE)
6 U   1,1,2,2-TETRACHLOROETHANE
6 U   TOLUENE
6 U   CHLOROBENZENE
6 U   ETHYL BENZENE
6 U   STYRENE
6 U   TOTAL XYLENES
18    PERCENT MOISTURE

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REMARKS

REMARKS

FOOTNOTES

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*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** ** * PROJECT NO. 90-804 SAMPLE NO. 50208 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SD-03 COLLECTION START: 09/17/90 1200 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X745 **
*** ** * UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS ***

14 U CHLOROMETHANE
14 U BROMOMETHANE
14 U VINYL CHLORIDE
14 U CHLOROETHANE
7U METHYLENE CHLORIDE
14 U ACETONE
7 U CARBON DISULFIDE
7 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
7 U 1,1-DICHLOROETHANE
7 U 1,2-DICHLOROETHENE (TOTAL)
7 U CHLOROFORM
7 U 1,2-DICHLOROETHANE
14 U METHYL ETHYL KETONE
7 U 1,1,1-TRICHLOROETHANE
7 U CARBON TETRACHLORIDE
14 U VINYL ACETATE
7 U BROMODICHLOROMETHANE

7 U 1,2-DICHLOROPROPANE
7 U CIS-1,3-DICHLOROPROPENE
7 U TRICHLOROETHENE (TRICHLOROETHYLENE)
7 U DIBROMOCHLOROMETHANE
7 U 1,1,2-TRICHLOROETHANE
7 U BENZENE
7 U TRANS-1,3-DICHLOROPROPENE
7 U BROMOFORM
14 U METHYL ISOBUTYL KETONE
14 U METHYL BUTYL KETONE
7 U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
7 U 1,1,2,2-TETRACHLOROETHANE
7 U TOLUENE
7 U CHLOROBENZENE
7 U ETHYL BENZENE
7 U STYRENE
7 U TOTAL XYLENES
30 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50209 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SD-04 COLLECTION START: 09/17/90 1135 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X742 **
*** **

UG/KG ANALYTICAL RESULTS
13 U CHLOROMETHANE
13 U BROMOMETHANE
13 U VINYL CHLORIDE
13 U CHLOROETHANE
7U METHYLENE CHLORIDE
13 U ACETONE
7 U CARBON DISULFIDE
7 U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
7 U 1,1-DICHLOROETHANE
7 U 1,2-DICHLOROETHENE (TOTAL)
7 U CHLOROFORM
7 U 1,2-DICHLOROETHANE
13 U METHYL ETHYL KETONE
7 U 1,1,1-TRICHLOROETHANE
7 U CARBON TETRACHLORIDE
13 U VINYL ACETATE
7 U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS
7 U 1,2-DICHLOROPROPANE
7 U CIS-1,3-DICHLOROPROPENE
7 U TRICHLOROETHENE (TRICHLOROETHYLENE)
7 U DIBROMOCHLOROMETHANE
7 U 1,1,2-TRICHLOROETHANE
7 U BENZENE
7 U TRANS-1,3-DICHLOROPROPENE
7 U BROMOFORM
13 U METHYL ISOBUTYL KETONE
13 U METHYL BUTYL KETONE
7 U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
7 U 1,1,2,2-TETRACHLOROETHANE
7 U TOLUENE
7 U CHLOROBENZENE
7 U ETHYL BENZENE
7 U STYRENE
7 U TOTAL XYLENES
25 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50211   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: TB-01-W   COLLECTION START: 09/17/90   0740   STOP: 00/00/00   **
**
** CASE NO.: 14888   SAS NO.:   D. NO.: X737   **
*** ** ** ** *
  
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UG/L   ANALYTICAL RESULTS
10 U   CHLOROMETHANE
10 U   BROMOMETHANE
10 U   VINYL CHLORIDE
10 U   CHLOROETHANE
5U     METHYLENE CHLORIDE
30U    ACETONE
5 U    CARBON DISULFIDE
5 U    1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5 U    1,1-DICHLOROETHANE
5 U    1,2-DICHLOROETHENE (TOTAL)
5 U    CHLOROFORM
5 U    1,2-DICHLOROETHANE
10 U   METHYL ETHYL KETONE
5 U    1,1,1-TRICHLOROETHANE
5 U    CARBON TETRACHLORIDE
10 U   VINYL ACETATE
5 U    BROMODICHLOROMETHANE
  
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UG/L   ANALYTICAL RESULTS
5 U    1,2-DICHLOROPROPANE
5 U    CIS-1,3-DICHLOROPROPENE
5U     TRICHLOROETHENE(TRICHLOROETHYLENE)
5 U    DIBROMOCHLOROMETHANE
5 U    1,1,2-TRICHLOROETHANE
5 U    BENZENE
5 U    TRANS-1,3-DICHLOROPROPENE
5 U    BROMOFORM
10 U   METHYL ISOBUTYL KETONE
10 U   METHYL BUTYL KETONE
5 U    TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5 U    1,1,2,2-TETRACHLOROETHANE
5U     TOLUENE
5 U    CHLOROBENZENE
5 U    ETHYL BENZENE
5 U    STYRENE
5 U    TOTAL XYLENES
  
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REMARKS

REMARKS

FOOTNOTES

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*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PURGEABLE ORGANICS DATA REPORT

*** ** *
** PROJECT NO. 90-804 SAMPLE NO. 50212 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: TB-01-S COLLECTION START: 09/14/90 0950 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X736 **
*** ** *
UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

11 U CHLOROMETHANE
11 U BROMOMETHANE
11 U VINYL CHLORIDE
11 U CHLOROETHANE
5 U METHYLENE CHLORIDE
11 U ACETONE
5 U CARBON DISULFIDE
5 U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)
5 U 1,1-DICHLOROETHANE
5 U 1,2-DICHLOROETHENE (TOTAL)
5 U CHLOROFORM
5 U 1,2-DICHLOROETHANE
11 U METHYL ETHYL KETONE
5 U 1,1,1-TRICHLOROETHANE
5 U CARBON TETRACHLORIDE
11 U VINYL ACETATE
5 U BROMODICHLOROMETHANE

5 U 1,2-DICHLOROPROPANE
5 U CIS-1,3-DICHLOROPROPENE
5 U TRICHLOROETHENE (TRICHLOROETHYLENE)
5 U DIBROMOCHLOROMETHANE
5 U 1,1,2-TRICHLOROETHANE
5 U BENZENE
5 U TRANS-1,3-DICHLOROPROPENE
5 U BROMOFORM
11 U METHYL ISOBUTYL KETONE
11 U METHYL BUTYL KETONE
5 U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
5 U 1,1,2,2-TETRACHLOROETHANE
5 U TOLUENE
5 U CHLOROBENZENE
5 U ETHYL BENZENE
5 U STYRENE
5 U TOTAL XYLENES
8 PERCENT MOISTURE

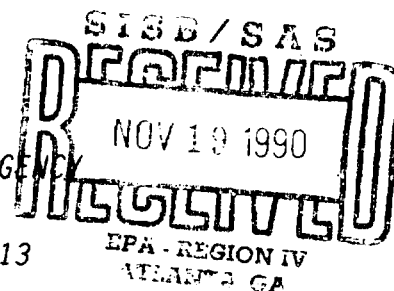
REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613



*****MEMORANDUM*****

DATE: 11/07/90

SUBJECT: Results of Extractable Organic Analysis;
90-804 TRIDENT N. LANDFILL
JEDBERG SC
CASE NO: 14888

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

CC:

ORGANIC DATA QUALIFIER REPORT

Case Number 14888

Project Number 90-804

SAS Number

Site ID. Trident N. Landfill, Jedberg, SC.

<u>Affected Samples</u>	<u>Compound or Fraction</u>	<u>Flag Used</u>	<u>Reason</u>
<u>Volatiles</u>			
DX753,738,740,741, 744,750,867	all positives	J	<quantitation limit
<u>Extractables</u>			
all soil samples	1,2,4-trichlorobenzene	J	low recovery QC spike
	2,4-dimethylphenol	R	unacceptable recovery QC spike
all samples	3-nitroaniline	R	unacceptable QC spike recovery
all water samples	di-n-butylphthalate	R	unacceptable QC spike recovery
DX740,744	butylbenzylphthalate	J	<quantitation limit
DX740,741,744	all extractables except 2,4-dimethylphenol and 3-nitroaniline	J	excessive holding time
DX755	all extractables except 3-nitroaniline and di-n-butylphthalate	J	exceeded 40CFR136 extraction holding time
DX738	di-n-octylphthalate	J	internal standard low
	benzo(b/k)fluoranthene	J	internal standard low
	benzo(a)pyrene	J	internal standard low
	indeno(1,2,3-cd)pyrene	J	internal standard low
	dibenz(a,h)anthracene	J	internal standard low
	benzo(g,h,i)perylene	J	internal standard low
DX747	di-n-octylphthalate	R	internal standard unacceptable
	benzo(b/k)fluoranthene	R	internal standard unacceptable
	benzo(a)pyrene	R	internal standard unacceptable
	indeno(1,2,3-cd)pyrene	R	internal standard unacceptable
	dibenz(a,h)anthracene	R	internal standard unacceptable
	benzo(g,h,i)perylene	R	internal standard unacceptable
<u>Pesticides</u>			
all samples	beta-BHC	R	unacceptable QC recovery
all waters	heptachlor	J	low QC spike recovery
	DDE and DDD	J	low QC spike recovery

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50186 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-01 COLLECTION START: 09/18/90 1500 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X746 **
*** ** ** ** *

UG/L ANALYTICAL RESULTS

10 U PHENOL
10 U BIS(2-CHLOROETHYL) ETHER
10 U 2-CHLOROPHENOL
10 U 1,3-DICHLOROBENZENE
10 U 1,4-DICHLOROBENZENE
10 U BENZYL ALCOHOL
10 U 1,2-DICHLOROBENZENE
10 U 2-METHYLPHENOL
10 U BIS(2-CHLOROISOPROPYL) ETHER
10 U (3-AND/OR 4-)METHYLPHENOL
10 U N-NITROSODI-N-PROPYLAMINE
10 U HEXACHLOROETHANE
10 U NITROBENZENE
10 U ISOPHORONE
10 U 2-NITROPHENOL
10 U 2,4-DIMETHYLPHENOL
50 U BENZOIC ACID
10 U BIS(2-CHLOROETHOXY) METHANE
10 U 2,4-DICHLOROPHENOL
10 U 1,2,4-TRICHLOROBENZENE
10 U NAPHTHALENE
10 U 4-CHLOROANILINE
10 U HEXACHLOROBUTADIENE
10 U 4-CHLORO-3-METHYLPHENOL
10 U 2-METHYLNAPHTHALENE
10 U HEXACHLOROCYCLOPENTADIENE (HCCP)
10 U 2,4,6-TRICHLOROPHENOL
50 U 2,4,5-TRICHLOROPHENOL
10 U 2-CHLORONAPHTHALENE
50 U 2-NITROANILINE
10 U DIMETHYL PHTHALATE
10 U ACENAPHTHYLENE
10 U 2,6-DINITROTOLUENE

UG/L ANALYTICAL RESULTS

50UR 3-NITROANILINE
10 U ACENAPHTHENE
50 U 2,4-DINITROPHENOL
50 U 4-NITROPHENOL
10 U DIBENZOFURAN
10 U 2,4-DINITROTOLUENE
10 U DIETHYL PHTHALATE
10 U 4-CHLOROPHENYL PHENYL ETHER
10 U FLUORENE
50 U 4-NITROANILINE
50 U 2-METHYL-4,6-DINITROPHENOL
10 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10 U 4-BROMOPHENYL PHENYL ETHER
10 U HEXACHLOROBENZENE (HCB)
50 U PENTACHLOROPHENOL
10 U PHENANTHRENE
10 U ANTHRACENE
10UR DI-N-BUTYLPHTHALATE
10 U FLUORANTHENE
10 U PYRENE
10 U BENZYL BUTYL PHTHALATE
20 U 3,3'-DICHLOROBENZIDINE
10 U BENZO(A)ANTHRACENE
10 U CHRYSENE
10 U BIS(2-ETHYLHEXYL) PHTHALATE
10 U DI-N-OCTYLPHTHALATE
10 U BENZO(B AND/OR K)FLUORANTHENE
10 U BENZO-A-PYRENE
10 U INDENO (1,2,3-CD) PYRENE
10 U DIBENZO(A,H)ANTHRACENE
10 U BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50187 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X753 **
*** ** ** ** *

UG/L ANALYTICAL RESULTS

10 U PHENOL
10 U BIS(2-CHLOROETHYL) ETHER
10 U 2-CHLOROPHENOL
10 U 1,3-DICHLOROBENZENE
10 U 1,4-DICHLOROBENZENE
10 U BENZYL ALCOHOL
10 U 1,2-DICHLOROBENZENE
10 U 2-METHYLPHENOL
10 U BIS(2-CHLOROISOPROPYL) ETHER
10 U (3-AND/OR 4-)METHYLPHENOL
10 U N-NITROSODI-N-PROPYLAMINE
10 U HEXACHLOROETHANE
10 U NITROBENZENE
10 U ISOPHORONE
10 U 2-NITROPHENOL
10 U 2,4-DIMETHYLPHENOL
50 U BENZOIC ACID
10 U BIS(2-CHLOROETHOXY) METHANE
10 U 2,4-DICHLOROPHENOL
10 U 1,2,4-TRICHLOROBENZENE
10 U NAPHTHALENE
10 U 4-CHLOROANILINE
10 U HEXACHLOROBUTADIENE
10 U 4-CHLORO-3-METHYLPHENOL
10 U 2-METHYLNAPHTHALENE
10 U HEXACHLOROCYCLOPENTADIENE (HCCP)
10 U 2,4,6-TRICHLOROPHENOL
50 U 2,4,5-TRICHLOROPHENOL
10 U 2-CHLORONAPHTHALENE
50 U 2-NITROANILINE
10 U DIMETHYL PHTHALATE
10 U ACENAPHTHYLENE
10 U 2,6-DINITROTOLUENE

UG/L ANALYTICAL RESULTS

50UR 3-NITROANILINE
10 U ACENAPHTHENE
50 U 2,4-DINITROPHENOL
50 U 4-NITROPHENOL
10 U DIBENZOFURAN
10 U 2,4-DINITROTOLUENE
10 U DIETHYL PHTHALATE
10 U 4-CHLOROPHENYL PHENYL ETHER
10 U FLUORENE
50 U 4-NITROANILINE
50 U 2-METHYL-4,6-DINITROPHENOL
10 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10 U 4-BROMOPHENYL PHENYL ETHER
10 U HEXACHLOROBENZENE (HCB)
50 U PENTACHLOROPHENOL
10 U PHENANTHRENE
10 U ANTHRACENE
10UR DI-N-BUTYLPHTHALATE
10 U FLUORANTHENE
10 U PYRENE
10 U BENZYL BUTYL PHTHALATE
20 U 3,3'-DICHLOROBENZIDINE
10 U BENZO(A)ANTHRACENE
10 U CHRYSENE
10 U BIS(2-ETHYLHEXYL) PHTHALATE
10 U DI-N-OCTYLPHTHALATE
10 U BENZO(B AND/OR K)FLUORANTHENE
10 U BENZO-A-PYRENE
10 U INDENO (1,2,3-CD) PYRENE
10 U DIBENZO(A,H)ANTHRACENE
10 U BENZO(GH)PERYLENE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50188 SAMPLE TYPE: PROG ELEM: NSF COLLECTED BY: M. COHEN **
** SOURCE: CITY: JEDBERG ST: SC **
** STATION ID: MW-03 COLLECTION START: 09/18/90 1200 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X754 **
*** ** ** ** **

UG/L ANALYTICAL RESULTS

10 U PHENOL
10 U BIS(2-CHLOROETHYL) ETHER
10 U 2-CHLOROPHENOL
10 U 1,3-DICHLOROBENZENE
10 U 1,4-DICHLOROBENZENE
10 U BENZYL ALCOHOL
10 U 1,2-DICHLOROBENZENE
10 U 2-METHYLPHENOL
10 U BIS(2-CHLOROISOPROPYL) ETHER
10 U (3-AND/OR 4-)METHYLPHENOL
10 U N-NITROSODI-N-PROPYLAMINE
10 U HEXACHLOROETHANE
10 U NITROBENZENE
10 U ISOPHORONE
10 U 2-NITROPHENOL
10 U 2,4-DIMETHYLPHENOL
50 U BENZOIC ACID
10 U BIS(2-CHLOROETHOXY) METHANE
10 U 2,4-DICHLOROPHENOL
10 U 1,2,4-TRICHLOROBENZENE
10 U NAPHTHALENE
10 U 4-CHLOROANILINE
10 U HEXACHLOROBUTADIENE
10 U 4-CHLORO-3-METHYLPHENOL
10 U 2-METHYLNAPHTHALENE
10 U HEXACHLOROCYCLOPENTADIENE (HCCP)
10 U 2,4,6-TRICHLOROPHENOL
50 U 2,4,5-TRICHLOROPHENOL
10 U 2-CHLORONAPHTHALENE
50 U 2-NITROANILINE
10 U DIMETHYL PHTHALATE
10 U ACENAPHTHYLENE
10 U 2,6-DINITROTOLUENE

UG/L ANALYTICAL RESULTS

50UR 3-NITROANILINE
10 U ACENAPHTHENE
50 U 2,4-DINITROPHENOL
50 U 4-NITROPHENOL
10 U DIBENZOFURAN
10 U 2,4-DINITROTOLUENE
10 U DIETHYL PHTHALATE
10 U 4-CHLOROPHENYL PHENYL ETHER
10 U FLUORENE
50 U 4-NITROANILINE
50 U 2-METHYL-4,6-DINITROPHENOL
10 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10 U 4-BROMOPHENYL PHENYL ETHER
10 U HEXACHLOROBENZENE (HCB)
50 U PENTACHLOROPHENOL
10 U PHENANTHRENE
10 U ANTHRACENE
10UR DI-N-BUTYLPHTHALATE
10 U FLUORANTHENE
10 U PYRENE
10 U BENZYL BUTYL PHTHALATE
20 U 3,3'-DICHLOROBENZIDINE
10 U BENZO(A)ANTHRACENE
10 U CHRYSENE
10 U BIS(2-ETHYLHEXYL) PHTHALATE
10 U DI-N-OCTYLPHTHALATE
10 U BENZO(B AND/OR K)FLUORANTHENE
10 U BENZO-A-PYRENE
10 U INDENO (1,2,3-CD) PYRENE
10 U DIBENZO(A,H)ANTHRACENE
10 U BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50189 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-04 COLLECTION START: 09/18/90 1435 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X755 **
*** ** ** ** *

UG/L ANALYTICAL RESULTS

10UJ PHENOL
10UJ BIS(2-CHLOROETHYL) ETHER
10UJ 2-CHLOROPHENOL
10UJ 1,3-DICHLOROBENZENE
10UJ 1,4-DICHLOROBENZENE
10UJ BENZYL ALCOHOL
10UJ 1,2-DICHLOROBENZENE
10UJ 2-METHYLPHENOL
10UJ BIS(2-CHLOROISOPROPYL) ETHER
10UJ (3-AND/OR 4-)METHYLPHENOL
10UJ N-NITROSODI-N-PROPYLAMINE
10UJ HEXACHLOROETHANE
10UJ NITROBENZENE
10UJ ISOPHORONE
10UJ 2-NITROPHENOL
10UJ 2,4-DIMETHYLPHENOL
50UJ BENZOIC ACID
10UJ BIS(2-CHLOROETHOXY) METHANE
10UJ 2,4-DICHLOROPHENOL
10UJ 1,2,4-TRICHLOROBENZENE
10UJ NAPHTHALENE
10UJ 4-CHLOROANILINE
10UJ HEXACHLOROBUTADIENE
10UJ 4-CHLORO-3-METHYLPHENOL
10UJ 2-METHYLNAPHTHALENE
10UJ HEXACHLOROCYCLOPENTADIENE (HCCP)
10UJ 2,4,6-TRICHLOROPHENOL
50UJ 2,4,5-TRICHLOROPHENOL
10UJ 2-CHLORONAPHTHALENE
50UJ 2-NITROANILINE
10UJ DIMETHYL PHTHALATE
10UJ ACENAPHTHYLENE
10UJ 2,6-DINITROTOLUENE

UG/L ANALYTICAL RESULTS

50UJ 3-NITROANILINE
10UJ ACENAPHTHENE
50UJ 2,4-DINITROPHENOL
50UJ 4-NITROPHENOL
10UJ DIBENZOFURAN
10UJ 2,4-DINITROTOLUENE
10UJ DIETHYL PHTHALATE
10UJ 4-CHLOROPHENYL PHENYL ETHER
10UJ FLUORENE
50UJ 4-NITROANILINE
50UJ 2-METHYL-4,6-DINITROPHENOL
10UJ N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10UJ 4-BROMOPHENYL PHENYL ETHER
10UJ HEXACHLOROBENZENE (HCB)
50UJ PENTACHLOROPHENOL
10UJ PHENANTHRENE
10UJ ANTHRACENE
10UJ DI-N-BUTYLPHTHALATE
10UJ FLUORANTHENE
10UJ PYRENE
10UJ BENZYL BUTYL PHTHALATE
20UJ 3,3'-DICHLOROBENZIDINE
10UJ BENZO(A)ANTHRACENE
10UJ CHRYSENE
10UJ BIS(2-ETHYLHEXYL) PHTHALATE
10UJ DI-N-OCTYLPHTHALATE
10UJ BENZO(B AND/OR K)FLUORANTHENE
10UJ BENZO-A-PYRENE
10UJ INDENO (1,2,3-CD) PYRENE
10UJ DIBENZO(A,H)ANTHRACENE
10UJ BENZO(GHI)PERYLENE

REMARKS
HOLDING TIMES EXCEEDED(40 CFR 136.OCTOBER 26,1984)

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** ** ** ** **

** PROJECT NO. 90-804	SAMPLE NO. 50190	SAMPLE TYPE: GROUNDWA	PROG ELEM: NSF	COLLECTED BY: M COHEN	**
** SOURCE: TRIDENT N. LANDFILL			CITY: JEDBERG	ST: SC	**
** STATION ID: PW-01			COLLECTION START: 09/18/90	0920 STOP: 00/00/00	**
** CASE NO.: 14888	SAS NO.:	D. NO.: X751			**

*** ** ** ** * UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS ** ** ** **

10 U PHENOL
10 U BIS(2-CHLOROETHYL) ETHER
10 U 2-CHLOROPHENOL
10 U 1,3-DICHLOROBENZENE
10 U 1,4-DICHLOROBENZENE
10 U BENZYL ALCOHOL
10 U 1,2-DICHLOROBENZENE
10 U 2-METHYLPHENOL
10 U BIS(2-CHLOROISOPROPYL) ETHER
10 U (3-AND/OR 4-)METHYLPHENOL
10 U N-NITROSODI-N-PROPYLAMINE
10 U HEXACHLOROETHANE
10 U NITROBENZENE
10 U ISOPHORONE
10 U 2-NITROPHENOL
10 U 2,4-DIMETHYLPHENOL
50 U BENZOIC ACID
10 U BIS(2-CHLOROETHOXY) METHANE
10 U 2,4-DICHLOROPHENOL
10 U 1,2,4-TRICHLOROBENZENE
10 U NAPHTHALENE
10 U 4-CHLOROANILINE
10 U HEXACHLOROBUTADIENE
10 U 4-CHLORO-3-METHYLPHENOL
10 U 2-METHYLNAPHTHALENE
10 U HEXACHLOROCYCLOPENTADIENE (HCCP)
10 U 2,4,6-TRICHLOROPHENOL
50 U 2,4,5-TRICHLOROPHENOL
10 U 2-CHLORONAPHTHALENE
50 U 2-NITROANILINE
10 U DIMETHYL PHTHALATE
10 U ACENAPHTHYLENE
10 U 2,6-DINITROTOLUENE

50UR 3-NITROANILINE
10 U ACENAPHTHENE
50 U 2,4-DINITROPHENOL
50 U 4-NITROPHENOL
10 U DIBENZOFURAN
10 U 2,4-DINITROTOLUENE
10 U DIETHYL PHTHALATE
10 U 4-CHLOROPHENYL PHENYL ETHER
10 U FLUORENE
50 U 4-NITROANILINE
50 U 2-METHYL-4,6-DINITROPHENOL
10 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10 U 4-BROMOPHENYL PHENYL ETHER
10 U HEXACHLOROBENZENE (HCB)
50 U PENTACHLOROPHENOL
10 U PHENANTHRENE
10 U ANTHRACENE
10UR DI-N-BUTYLPHTHALATE
10 U FLUORANTHENE
10 U PYRENE
10 U BENZYL BUTYL PHTHALATE
20 U 3,3'-DICHLOROBENZIDINE
10 U BENZO(A)ANTHRACENE
10 U CHRYSENE
10 U BIS(2-ETHYLHEXYL) PHTHALATE
10 U DI-N-OCTYLPHTHALATE
10 U BENZO(B AND/OR K)FLUORANTHENE
10 U BENZO-A-PYRENE
10 U INDENO (1,2,3-CD) PYRENE
10 U DIBENZO(A,H)ANTHRACENE
10 U BENZO(GHI)PERYLENE

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

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***
** PROJECT NO. 90-804    SAMPLE NO. 50191  SAMPLE TYPE: GROUNDWA  PROG ELEM: NSF  COLLECTED BY: M COHEN
** SOURCE: TRIDENT N. LANDFILL  CITY: JEDBERG  ST: SC
** STATION ID: PW-02    COLLECTION START: 09/18/90  1010  STOP: 00/00/00
**
** CASE NO.: 14888    SAS NO.:    D. NO.: X752
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UG/L ANALYTICAL RESULTS

10 U PHENOL
 10 U BIS(2-CHLOROETHYL) ETHER
 10 U 2-CHLOROPHENOL
 10 U 1,3-DICHLOROBENZENE
 10 U 1,4-DICHLOROBENZENE
 10 U BENZYL ALCOHOL
 10 U 1,2-DICHLOROBENZENE
 10 U 2-METHYLPHENOL
 10 U BIS(2-CHLOROISOPROPYL) ETHER
 10 U (3-AND/OR 4-)METHYLPHENOL
 10 U N-NITROSODI-N-PROPYLAMINE
 10 U HEXACHLOROETHANE
 10 U NITROBENZENE
 10 U ISOPHORONE
 10 U 2-NITROPHENOL
 10 U 2,4-DIMETHYLPHENOL
 50 U BENZOIC ACID
 10 U BIS(2-CHLOROETHOXY) METHANE
 10 U 2,4-DICHLOROPHENOL
 10 U 1,2,4-TRICHLOROBENZENE
 10 U NAPHTHALENE
 10 U 4-CHLOROANILINE
 10 U HEXACHLOROBUTADIENE
 10 U 4-CHLORO-3-METHYLPHENOL
 10 U 2-METHYLNAPHTHALENE
 10 U HEXACHLOROCYCLOPENTADIENE (HCCP)
 10 U 2,4,6-TRICHLOROPHENOL
 50 U 2,4,5-TRICHLOROPHENOL
 10 U 2-CHLORONAPHTHALENE
 50 U 2-NITROANILINE
 10 U DIMETHYL PHTHALATE
 10 U ACENAPHTHYLENE
 10 U 2,6-DINITROTOLUENE

UG/L ANALYTICAL RESULTS

50UR 3-NITROANILINE
 10 U ACENAPHTHENE
 50 U 2,4-DINITROPHENOL
 50 U 4-NITROPHENOL
 10 U DIBENZOFURAN
 10 U 2,4-DINITROTOLUENE
 10 U DIETHYL PHTHALATE
 10 U 4-CHLOROPHENYL PHENYL ETHER
 10 U FLUORENE
 50 U 4-NITROANILINE
 50 U 2-METHYL-4,6-DINITROPHENOL
 10 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
 10 U 4-BROMOPHENYL PHENYL ETHER
 10 U HEXACHLOROBENZENE (HCB)
 50 U PENTACHLOROPHENOL
 10 U PHENANTHRENE
 10 U ANTHRACENE
 10UR DI-N-BUTYLPHTHALATE
 10 U FLUORANTHENE
 10 U PYRENE
 10 U BENZYL BUTYL PHTHALATE
 20 U 3,3'-DICHLOROBENZIDINE
 10 U BENZO(A)ANTHRACENE
 10 U CHRYSENE
 10 U BIS(2-ETHYLHEXYL) PHTHALATE
 10 U DI-N-OCTYLPHTHALATE
 10 U BENZO(B AND/OR K)FLUORANTHENE
 10 U BENZO-A-PYRENE
 10 U INDENO (1,2,3-CD) PYRENE
 10 U DIBENZO(A,H)ANTHRACENE
 10 U BENZO(GHI)PERYLENE

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50195   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SS-01   COLLECTION START: 09/17/90   1100   STOP: 00/00/00   **
** CASE NO.: 14888   SAS NO.:   D. NO.: X740   **
*** ** ** ** *
  
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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
700UJ	PHENOL	3400UR	3-NITROANILINE
700UJ	BIS(2-CHLOROETHYL) ETHER	700UJ	ACENAPHTHENE
700UJ	2-CHLOROPHENOL	3400UJ	2,4-DINITROPHENOL
700UJ	1,3-DICHLOROBENZENE	3400UJ	4-NITROPHENOL
700UJ	1,4-DICHLOROBENZENE	700UJ	DIBENZOFURAN
700UJ	BENZYL ALCOHOL	700UJ	2,4-DINITROTOLUENE
700UJ	1,2-DICHLOROBENZENE	700UJ	DIETHYL PHTHALATE
700UJ	2-METHYLPHENOL	700UJ	4-CHLOROPHENYL PHENYL ETHER
700UJ	BIS(2-CHLOROISOPROPYL) ETHER	700UJ	FLUORENE
700UJ	(3-AND/OR 4-)METHYLPHENOL	3400UJ	4-NITROANILINE
700UJ	N-NITROSODI-N-PROPYLAMINE	3400UJ	2-METHYL-4,6-DINITROPHENOL
700UJ	HEXACHLOROETHANE	700UJ	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
700UJ	NITROBENZENE	700UJ	4-BROMOPHENYL PHENYL ETHER
700UJ	ISOPHORONE	700UJ	HEXACHLOROBENZENE (HCB)
700UJ	2-NITROPHENOL	3400UJ	PENTACHLOROPHENOL
700UR	2,4-DIMETHYLPHENOL	700UJ	PHENANTHRENE
3400UJ	BENZOIC ACID	700UJ	ANTHRACENE
700UJ	BIS(2-CHLOROETHOXY) METHANE	700UJ	DI-N-BUTYLPHTHALATE
700UJ	2,4-DICHLOROPHENOL	700UJ	FLUORANTHENE
700UJ	1,2,4-TRICHLOROBENZENE	700UJ	PYRENE
700UJ	NAPHTHALENE	86J	BENZYL BUTYL PHTHALATE
700UJ	4-CHLOROANILINE	1400UJ	3,3'-DICHLOROBENZIDINE
700UJ	HEXACHLOROBUTADIENE	700UJ	BENZO(A)ANTHRACENE
700UJ	4-CHLORO-3-METHYLPHENOL	700UJ	CHRYSENE
700UJ	2-METHYLNAPHTHALENE	700UJ	BIS(2-ETHYLHEXYL) PHTHALATE
700UJ	HEXACHLOROCYCLOPENTADIENE (HCCP)	700UJ	DI-N-OCTYLPHTHALATE
700UJ	2,4,6-TRICHLOROPHENOL	700UJ	BENZO(B AND/OR K)FLUORANTHENE
3400UJ	2,4,5-TRICHLOROPHENOL	700UJ	BENZO-A-PYRENE
700UJ	2-CHLORONAPHTHALENE	700UJ	INDENO (1,2,3-CD) PYRENE
3400UJ	2-NITROANILINE	700UJ	DIBENZO(A,H)ANTHRACENE
700UJ	DIMETHYL PHTHALATE	700UJ	BENZO(GHI)PERYLENE
700UJ	ACENAPHTHYLENE	6	PERCENT MOISTURE
700UJ	2,6-DINITROTOLUENE		

REMARKS
EXCESSIVE HOLDING TIME

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50196 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SS-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X749 **
*** **

UG/KG ANALYTICAL RESULTS

730 U PHENOL
730 U BIS(2-CHLOROETHYL) ETHER
730 U 2-CHLOROPHENOL
730 U 1,3-DICHLOROBENZENE
730 U 1,4-DICHLOROBENZENE
730 U BENZYL ALCOHOL
730 U 1,2-DICHLOROBENZENE
730 U 2-METHYLPHENOL
730 U BIS(2-CHLOROISOPROPYL) ETHER
730 U (3-AND/OR 4-)METHYLPHENOL
730 U N-NITROSODI-N-PROPYLAMINE
730 U HEXACHLOROETHANE
730 U NITROBENZENE
730 U ISOPHORONE
730 U 2-NITROPHENOL
730UR 2,4-DIMETHYLPHENOL
3600 U BENZOIC ACID
730 U BIS(2-CHLOROETHOXY) METHANE
730 U 2,4-DICHLOROPHENOL
730UJ 1,2,4-TRICHLOROBENZENE
730 U NAPHTHALENE
730 U 4-CHLOROANILINE
730 U HEXACHLOROBUTADIENE
730 U 4-CHLORO-3-METHYLPHENOL
730 U 2-METHYLNAPHTHALENE
730 U HEXACHLOROCYCLOPENTADIENE (HCCP)
730 U 2,4,6-TRICHLOROPHENOL
3600 U 2,4,5-TRICHLOROPHENOL
730 U 2-CHLORONAPHTHALENE
3600 U 2-NITROANILINE
730 U DIMETHYL PHTHALATE
730 U ACENAPHTHYLENE
730 U 2,6-DINITROTOLUENE

UG/KG ANALYTICAL RESULTS

3600UR 3-NITROANILINE
730 U ACENAPHTHENE
3600 U 2,4-DINITROPHENOL
3600 U 4-NITROPHENOL
730 U DIBENZOFURAN
730 U 2,4-DINITROTOLUENE
730 U DIETHYL PHTHALATE
730 U 4-CHLOROPHENYL PHENYL ETHER
730 U FLUORENE
3600 U 4-NITROANILINE
3600 U 2-METHYL-4,6-DINITROPHENOL
730 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
730 U 4-BROMOPHENYL PHENYL ETHER
730 U HEXACHLOROBENZENE (HCB)
3600 U PENTACHLOROPHENOL
730 U PHENANTHRENE
730 U ANTHRACENE
730 U DI-N-BUTYLPHTHALATE
730 U FLUORANTHENE
730 U PYRENE
730 U BENZYL BUTYL PHTHALATE
1500 U 3,3'-DICHLOROBENZIDINE
730 U BENZO(A)ANTHRACENE
730 U CHRYSENE
730 U BIS(2-ETHYLHEXYL) PHTHALATE
730 U DI-N-OCTYLPHTHALATE
730 U BENZO(B AND/OR K)FLUORANTHENE
730 U BENZO-A-PYRENE
730 U INDENO (1,2,3-CD) PYRENE
730 U DIBENZO(A,H)ANTHRACENE
730 U BENZO(GHI)PERYLENE
10 PERCENT MOISTURE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** PROJECT NO. 90-804 SAMPLE NO. 50197 SAMPLE TYPE: SOIL
*** SOURCE: CITY: JEDBERG
*** STATION ID: SS-03 COLLECTION START: 09/18/90 1200 STOP: 00/00/00

*** CASE NO.: 14888 SAS NO.: D. NO.: X756
*** ANALYTICAL RESULTS ANALYTICAL RESULTS
*** UG/KG UG/KG

740 U	PHENOL	3600 U	3-NITROANILINE
740 U	BIS(2-CHLOROETHYL) ETHER	740 U	ACENAPHTHENE
740 U	2-CHLOROPHENOL	3600 U	2,4-DINITROPHENOL
740 U	1,3-DICHLOROBENZENE	3600 U	4-NITROPHENOL
740 U	1,4-DICHLOROBENZENE	740 U	DIBENZOFURAN
740 U	BENZYL ALCOHOL	740 U	2,4-DINITROTOLUENE
740 U	1,2-DICHLOROBENZENE	740 U	DIETHYL PHTHALATE
740 U	2-METHYLPHENOL	740 U	4-CHLOROPHENYL PHENYL ETHER
740 U	BIS(2-CHLOROISOPROPYL) ETHER	740 U	FLUORENE
740 U	(3-AND/OR 4-METHYLPHENOL	3600 U	4-NITROANILINE
740 U	N-NITROSODI-N-PROPYLAMINE	3600 U	2-METHYL-4,6-DINITROPHENOL
740 U	HEXACHLOROETHANE	740 U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
740 U	NITROBENZENE	740 U	4-BROMOPHENYL PHENYL ETHER
740 U	ISOPHORONE	740 U	HEXACHLOROBENZENE (HCB)
740 U	2-NITROPHENOL	3600 U	PENTACHLOROPHENOL
740 U	2,4-DIMETHYLPHENOL	740 U	PHENANTHRENE
3600 U	BENZOIC ACID	740 U	ANTHRACENE
740 U	BIS(2-CHLOROETHOXY) METHANE	740 U	DI-N-BUTYLPHTHALATE
740 U	2,4-DICHLOROPHENOL	740 U	FLUORANTHENE
740 U	1,2,4-TRICHLOROBENZENE	740 U	PYRENE
740 U	NAPHTHALENE	740 U	BENZYL BUTYL PHTHALATE
740 U	4-CHLOROANILINE	1500 U	3,3'-DICHLOROBENZIDINE
740 U	HEXACHLOROBUTADIENE	740 U	BENZO(A)ANTHRACENE
740 U	4-CHLORO-3-METHYLPHENOL	740 U	CHRYSENE
740 U	2-METHYLNAPHTHALENE	740 U	BIS(2-ETHYLHEXYL) PHTHALATE
740 U	HEXACHLOROCYCLOPENTADIENE (HCCP)	740 U	DI-N-OCTYLPHTHALATE
3600 U	2,4,6-TRICHLOROPHENOL	740 U	BENZO(B AND/OR K)FLUORANTHENE
740 U	2,4,5-TRICHLOROPHENOL	740 U	BENZO-A-PYRENE
740 U	2-CHLORONAPHTHALENE	740 U	INDENO (1,2,3-CD) PYRENE
3600 U	2-NITROANILINE	740 U	DIBENZO(A,H)ANTHRACENE
740 U	DIMETHYL PHTHALATE	740 U	BENZO(GHI)PERYLENE
740 U	ACENAPHTHYLENE	740 U	PERCENT MOISTURE
740 U	2,6-DINITROTOLUENE	11	

*** FOOTNOTES ***
*A-AVERAGE VALUE
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50198 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SS-04 COLLECTION START: 09/17/90 1020 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X738 **
*** ** ** ** * UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS ***

780 U PHENOL
780 U BIS(2-CHLOROETHYL) ETHER
780 U 2-CHLOROPHENOL
780 U 1,3-DICHLOROBENZENE
780 U 1,4-DICHLOROBENZENE
780 U BENZYL ALCOHOL
780 U 1,2-DICHLOROBENZENE
780 U 2-METHYLPHENOL
780 U BIS(2-CHLOROISOPROPYL) ETHER
780 U (3-AND/OR 4-)METHYLPHENOL
780 U N-NITROSODI-N-PROPYLAMINE
780 U HEXACHLOROETHANE
780 U NITROBENZENE
780 U ISOPHORONE
780 U 2-NITROPHENOL
780UR 2,4-DIMETHYLPHENOL
3800 U BENZOIC ACID
780 U BIS(2-CHLOROETHOXY) METHANE
780 U 2,4-DICHLOROPHENOL
780UJ 1,2,4-TRICHLOROBENZENE
780 U NAPHTHALENE
780 U 4-CHLOROANILINE
780 U HEXACHLOROBUTADIENE
780 U 4-CHLORO-3-METHYLPHENOL
780 U 2-METHYLNAPHTHALENE
780 U HEXACHLOROCYCLOPENTADIENE (HCCP)
780 U 2,4,6-TRICHLOROPHENOL
3800 U 2,4,5-TRICHLOROPHENOL
780 U 2-CHLORONAPHTHALENE
3800 U 2-NITROANILINE
780 U DIMETHYL PHTHALATE
780 U ACENAPHTHYLENE
780 U 2,6-DINITROTOLUENE

3800UR 3-NITROANILINE
780 U ACENAPHTHENE
3800 U 2,4-DINITROPHENOL
3800 U 4-NITROPHENOL
780 U DIBENZOFURAN
780 U 2,4-DINITROTOLUENE
780 U DIETHYL PHTHALATE
780 U 4-CHLOROPHENYL PHENYL ETHER
780 U FLUORENE
3800 U 4-NITROANILINE
3800 U 2-METHYL-4,6-DINITROPHENOL
780 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
780 U 4-BROMOPHENYL PHENYL ETHER
780 U HEXACHLOROBENZENE (HCB)
3800 U PENTACHLOROPHENOL
780 U PHENANTHRENE
780 U ANTHRACENE
780 U DI-N-BUTYLPHTHALATE
780 U FLUORANTHENE
780 U PYRENE
780 U BENZYL BUTYL PHTHALATE
1600 U 3,3'-DICHLOROBENZIDINE
780 U BENZO(A)ANTHRACENE
780 U CHRYSENE
780 U BIS(2-ETHYLHEXYL) PHTHALATE
780UJ DI-N-OCTYLPHTHALATE
780UJ BENZO(B AND/OR K)FLUORANTHENE
780UJ BENZO-A-PYRENE
780UJ INDENO (1,2,3-CD) PYRENE
780UJ DIBENZO(A,H)ANTHRACENE
780UJ BENZO(GH)PERYLENE
15 PERCENT MOISTURE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

11/06/90

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** PROJECT NO. 90-804    SAMPLE NO. 50199  SAMPLE TYPE: SOIL    PROG ELEM: NSF    COLLECTED BY: M COHEN    **
** SOURCE:                CITY: JEDBERG    ST: SC                **
** STATION ID: SS-05      COLLECTION START: 09/17/90 1245    STOP: 00/00/00    **
**                                                                **
** CASE NO.: 14888        SAS NO.:          D. NO.: X743        **
*****
** UG/KG    ANALYTICAL RESULTS    UG/KG    ANALYTICAL RESULTS    **

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730 U PHENOL
730 U BIS(2-CHLOROETHYL) ETHER
730 U 2-CHLOROPHENOL
730 U 1,3-DICHLOROBENZENE
730 U 1,4-DICHLOROBENZENE
730 U BENZYL ALCOHOL
730 U 1,2-DICHLOROBENZENE
730 U 2-METHYLPHENOL
730 U BIS(2-CHLOROISOPROPYL) ETHER
730 U (3-AND/OR 4-)METHYLPHENOL
730 U N-NITROSODI-N-PROPYLAMINE
730 U HEXACHLOROETHANE
730 U NITROBENZENE
730 U ISOPHORONE
730 U 2-NITROPHENOL
730UR 2,4-DIMETHYLPHENOL
3500 U BENZOIC ACID
730 U BIS(2-CHLOROETHOXY) METHANE
730 U 2,4-DICHLOROPHENOL
730UJ 1,2,4-TRICHLOROBENZENE
730 U NAPHTHALENE
730 U 4-CHLOROANILINE
730 U HEXACHLOROBUTADIENE
730 U 4-CHLORO-3-METHYLPHENOL
730 U 2-METHYLNAPHTHALENE
730 U HEXACHLOROCYCLOPENTADIENE (HCCP)
730 U 2,4,6-TRICHLOROPHENOL
3500 U 2,4,5-TRICHLOROPHENOL
730 U 2-CHLORONAPHTHALENE
3500 U 2-NITROANILINE
730 U DIMETHYL PHTHALATE
730 U ACENAPHTHYLENE
730 U 2,6-DINITROTOLUENE

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3500UR 3-NITROANILINE
730 U ACENAPHTHENE
3500 U 2,4-DINITROPHENOL
3500 U 4-NITROPHENOL
730 U DIBENZOFURAN
730 U 2,4-DINITROTOLUENE
730 U DIETHYL PHTHALATE
730 U 4-CHLOROPHENYL PHENYL ETHER
730 U FLUORENE
3500 U 4-NITROANILINE
3500 U 2-METHYL-4,6-DINITROPHENOL
730 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
730 U 4-BROMOPHENYL PHENYL ETHER
730 U HEXACHLOROBENZENE (HCB)
3500 U PENTACHLOROPHENOL
730 U PHENANTHRENE
730 U ANTHRACENE
730 U DI-N-BUTYLPHTHALATE
730 U FLUORANTHENE
730 U PYRENE
730 U BENZYL BUTYL PHTHALATE
1500 U 3,3'-DICHLORO BENZIDINE
730 U BENZO(A)ANTHRACENE
730 U CHRYSENE
730 U BIS(2-ETHYLHEXYL) PHTHALATE
730 U DI-N-OCTYLPHTHALATE
730 U BENZO(B AND/OR K)FLUORANTHENE
730 U BENZO-A-PYRENE
730 U INDENO (1,2,3-CD) PYRENE
730 U DIBENZO(A,H)ANTHRACENE
730 U BENZO(GH)PERYLENE
9 PERCENT MOISTURE

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*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50200 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-01 COLLECTION START: 09/17/90 1125 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X741 **

UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

860UJ PHENOL
860UJ BIS(2-CHLOROETHYL) ETHER
860UJ 2-CHLOROPHENOL
860UJ 1,3-DICHLOROBENZENE
860UJ 1,4-DICHLOROBENZENE
860UJ BENZYL ALCOHOL
860UJ 1,2-DICHLOROBENZENE
860UJ 2-METHYLPHENOL
860UJ BIS(2-CHLOROISOPROPYL) ETHER
860UJ (3-AND/OR 4-)METHYLPHENOL
860UJ N-NITROSODI-N-PROPYLAMINE
860UJ HEXACHLOROETHANE
860UJ NITROBENZENE
860UJ ISOPHORONE
860UJ 2-NITROPHENOL
860UJ 2,4-DIMETHYLPHENOL
4200UJ BENZOIC ACID
860UJ BIS(2-CHLOROETHOXY) METHANE
860UJ 2,4-DICHLOROPHENOL
860UJ 1,2,4-TRICHLOROBENZENE
860UJ NAPHTHALENE
860UJ 4-CHLOROANILINE
860UJ HEXACHLOROBUTADIENE
860UJ 4-CHLORO-3-METHYLPHENOL
860UJ 2-METHYLNAPHTHALENE
860UJ HEXACHLOROCYCLOPENTADIENE (HCCP)
860UJ 2,4,6-TRICHLOROPHENOL
4200UJ 2,4,5-TRICHLOROPHENOL
860UJ 2-CHLORONAPHTHALENE
4200UJ 2-NITROANILINE
860UJ DIMETHYL PHTHALATE
860UJ ACENAPHTHYLENE
860UJ 2,6-DINITROTOLUENE

4200UJ 3-NITROANILINE
860UJ ACENAPHTHENE
4200UJ 2,4-DINITROPHENOL
4200UJ 4-NITROPHENOL
860UJ DIBENZOFURAN
860UJ 2,4-DINITROTOLUENE
860UJ DIETHYL PHTHALATE
860UJ 4-CHLOROPHENYL PHENYL ETHER
860UJ FLUORENE
4200UJ 4-NITROANILINE
4200UJ 2-METHYL-4,6-DINITROPHENOL
860UJ N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
860UJ 4-BROMOPHENYL PHENYL ETHER
860UJ HEXACHLOROBENZENE (HCB)
4200UJ PENTACHLOROPHENOL
860UJ PHENANTHRENE
860UJ ANTHRACENE
860UJ DI-N-BUTYLPHTHALATE
860UJ FLUORANTHENE
860UJ PYRENE
860UJ BENZYL BUTYL PHTHALATE
1700UJ 3,3'-DICHLOROBENZIDINE
860UJ BENZO(A)ANTHRACENE
860UJ CHRYSENE
860UJ BIS(2-ETHYLHEXYL) PHTHALATE
860UJ DI-N-OCTYLPHTHALATE
860UJ BENZO(B AND/OR K)FLUORANTHENE
860UJ BENZO-A-PYRENE
860UJ INDENO (1,2,3-CD) PYRENE
860UJ DIBENZO(A,H)ANTHRACENE
860UJ BENZO(GH)PERYLENE
24 PERCENT MOISTURE

REMARKS
EXCESSIVE HOLDING TIME

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** PROJECT NO. 90-804 SAMPLE NO. 50201 SAMPLE TYPE: SOIL
*** SOURCE: TRIDENT N. LANDFILL
*** STATION ID: SB-02
*** CASE NO.: 14888
*** ANALYTICAL RESULTS

PROG ELEM: NSF COLLECTED BY: M COHEN
CITY: JEDBERG ST: SC
COLLECTION START: 09/18/90 1135 STOP: 00/00/00

SAS NO.: D. NO.: X750
UG/KG ANALYTICAL RESULTS ANALYTICAL RESULTS

820 U	PHENOL	4000U	3-NITROANILINE
820 U	BIS(2-CHLOROETHYL) ETHER	820 U	ACENAPHTHENE
820 U	2-CHLOROPHENOL	4000 U	2,4-DINITROPHENOL
820 U	1,3-DICHLOROBENZENE	4000 U	4-NITROPHENOL
820 U	1,4-DICHLOROBENZENE	820 U	DIBENZOFURAN
820 U	BENZYL ALCOHOL	820 U	2,4-DINITROTOLUENE
820 U	1,2-DICHLOROBENZENE	820 U	DIETHYL PHTHALATE
820 U	2-METHYLPHENOL	820 U	4-CHLOROPHENYL PHENYL ETHER
820 U	BIS(2-CHLOROISOPROPYL) ETHER	820 U	FLUORENE
820 U	(3-AND/OR 4-)METHYLPHENOL	4000 U	4-NITROANILINE
820 U	N-NITROSODI-N-PROPYLAMINE	4000 U	2-METHYL-4,6-DINITROPHENOL
820 U	HEXACHLOROETHANE	820 U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
820 U	NITROBENZENE	820 U	4-BROMOPHENYL PHENYL ETHER
820 U	ISOPHORONE	820 U	HEXACHLOROBENZENE (HCB)
820 U	2-NITROPHENOL	4000 U	PENTACHLOROPHENOL
820U	2,4-DIMETHYLPHENOL	820 U	PHENANTHRENE
4000 U	BENZOIC ACID	820 U	ANTHRACENE
820 U	BIS(2-CHLOROETHOXY) METHANE	820 U	DI-N-BUTYLPHTHALATE
820 U	2,4-DICHLOROPHENOL	820 U	FLUORANTHENE
820U	1,2,4-TRICHLOROBENZENE	820 U	PYRENE
820 U	NAPHTHALENE	820 U	BENZYL BUTYL PHTHALATE
820 U	4-CHLOROANILINE	1600 U	3,3'-DICHLOROBENZIDINE
820 U	HEXACHLOROBUTADIENE	820 U	BENZO(A)ANTHRACENE
820 U	4-CHLORO-3-METHYLPHENOL	820 U	CHRYSENE
820 U	2-METHYLNAPHTHALENE	820 U	BIS(2-ETHYLHEXYL) PHTHALATE
820 U	HEXACHLOROCYCLOPENTADIENE (HCCP)	820 U	DI-N-OCTYLPHTHALATE
820 U	2,4,6-TRICHLOROPHENOL	820 U	BENZO(B AND/OR K)FLUORANTHENE
4000 U	2,4,5-TRICHLOROPHENOL	820 U	BENZO-A-PYRENE
820 U	2-CHLORONAPHTHALENE	820 U	INDENO (1,2,3-CD) PYRENE
4000 U	2-NITROANILINE	820 U	DIBENZO(A,H)ANTHRACENE
820 U	DIMETHYL PHTHALATE	820 U	BENZO(GH)PERYLENE
820 U	ACENAPHTHYLENE	820 U	PERCENT MOISTURE
820 U	2,6-DINITROTOLUENE	20	

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50202 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-03 COLLECTION START: 09/18/90 1225 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X866 **
*** **
UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

780 U PHENOL
780 U BIS(2-CHLOROETHYL) ETHER
780 U 2-CHLOROPHENOL
780 U 1,3-DICHLOROBENZENE
780 U 1,4-DICHLOROBENZENE
780 U BENZYL ALCOHOL
780 U 1,2-DICHLOROBENZENE
780 U 2-METHYLPHENOL
780 U BIS(2-CHLOROISOPROPYL) ETHER
780 U (3-AND/OR 4-)METHYLPHENOL
780 U N-NITROSODI-N-PROPYLAMINE
780 U HEXACHLOROETHANE
780 U NITROBENZENE
780 U ISOPHORONE
780 U 2-NITROPHENOL
780UR 2,4-DIMETHYLPHENOL
3800 U BENZOIC ACID
780 U BIS(2-CHLOROETHOXY) METHANE
780 U 2,4-DICHLOROPHENOL
780UJ 1,2,4-TRICHLOROBENZENE
780 U NAPHTHALENE
780 U 4-CHLOROANILINE
780 U HEXACHLOROBUTADIENE
780 U 4-CHLORO-3-METHYLPHENOL
780 U 2-METHYLNAPHTHALENE
780 U HEXACHLOROCYCLOPENTADIENE (HCCP)
780 U 2,4,6-TRICHLOROPHENOL
3800 U 2,4,5-TRICHLOROPHENOL
780 U 2-CHLORONAPHTHALENE
3800 U 2-NITROANILINE
780 U DIMETHYL PHTHALATE
780 U ACENAPHTHYLENE
780 U 2,6-DINITROTOLUENE

3800UR 3-NITROANILINE
780 U ACENAPHTHENE
3800 U 2,4-DINITROPHENOL
3800 U 4-NITROPHENOL
780 U DIBENZOFURAN
780 U 2,4-DINITROTOLUENE
780 U DIETHYL PHTHALATE
780 U 4-CHLOROPHENYL PHENYL ETHER
780 U FLUORENE
3800 U 4-NITROANILINE
3800 U 2-METHYL-4,6-DINITROPHENOL
780 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
780 U 4-BROMOPHENYL PHENYL ETHER
780 U HEXACHLOROBENZENE (HCB)
3800 U PENTACHLOROPHENOL
780 U PHENANTHRENE
780 U ANTHRACENE
780 U DI-N-BUTYLPHTHALATE
780 U FLUORANTHENE
780 U PYRENE
780 U BENZYL BUTYL PHTHALATE
1600 U 3,3'-DICHLOROBENZIDINE
780 U BENZO(A)ANTHRACENE
780 U CHRYSENE
780 U BIS(2-ETHYLHEXYL) PHTHALATE
780 U DI-N-OCTYLPHTHALATE
780 U BENZO(B AND/OR K)FLUORANTHENE
780 U BENZO-A-PYRENE
780 U INDENO (1,2,3-CD) PYRENE
780 U DIBENZO(A,H)ANTHRACENE
780 U BENZO(GHI)PERYLENE
15 PERCENT MOISTURE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50203   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-04   COLLECTION START: 09/17/90   1035   STOP: 00/00/00   **
**
** CASE NO.: 14888   SAS NO.:   D. NO.: X739   **
*** ** ** ** *
  
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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
830 U	PHENOL	4000UR	3-NITROANILINE
830 U	BIS(2-CHLOROETHYL) ETHER	830 U	ACENAPHTHENE
830 U	2-CHLOROPHENOL	4000 U	2,4-DINITROPHENOL
830 U	1,3-DICHLOROBENZENE	4000 U	4-NITROPHENOL
830 U	1,4-DICHLOROBENZENE	830 U	DIBENZOFURAN
830 U	BENZYL ALCOHOL	830 U	2,4-DINITROTOLUENE
830 U	1,2-DICHLOROBENZENE	830 U	DIETHYL PHTHALATE
830 U	2-METHYLPHENOL	830 U	4-CHLOROPHENYL PHENYL ETHER
830 U	BIS(2-CHLOROISOPROPYL) ETHER	830 U	FLUORENE
830 U	(3-AND/OR 4-)METHYLPHENOL	4000 U	4-NITROANILINE
830 U	N-NITROSODI-N-PROPYLAMINE	4000 U	2-METHYL-4,6-DINITROPHENOL
830 U	HEXACHLOROETHANE	830 U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
830 U	NITROBENZENE	830 U	4-BROMOPHENYL PHENYL ETHER
830 U	ISOPHORONE	830 U	HEXACHLOROBENZENE (HCB)
830 U	2-NITROPHENOL	4000 U	PENTACHLOROPHENOL
830UR	2,4-DIMETHYLPHENOL	830 U	PHENANTHRENE
4000 U	BENZOIC ACID	830 U	ANTHRACENE
830 U	BIS(2-CHLOROETHOXY) METHANE	830 U	DI-N-BUTYLPHTHALATE
830 U	2,4-DICHLOROPHENOL	830 U	FLUORANTHENE
830UJ	1,2,4-TRICHLOROBENZENE	830 U	PYRENE
830 U	NAPHTHALENE	830 U	BENZYL BUTYL PHTHALATE
830 U	4-CHLOROANILINE	1700 U	3,3'-DICHLOROBENZIDINE
830 U	HEXACHLOROBUTADIENE	830 U	BENZO(A)ANTHRACENE
830 U	4-CHLORO-3-METHYLPHENOL	830 U	CHRYSENE
830 U	2-METHYLNAPHTHALENE	830 U	BIS(2-ETHYLHEXYL) PHTHALATE
830 U	HEXACHLOROCYCLOPENTADIENE (HCCP)	830 U	DI-N-OCTYLPHTHALATE
830 U	2,4,6-TRICHLOROPHENOL	830 U	BENZO(B AND/OR K)FLUORANTHENE
4000 U	2,4,5-TRICHLOROPHENOL	830 U	BENZO-A-PYRENE
830 U	2-CHLORONAPHTHALENE	830 U	INDENO (1,2,3-CD) PYRENE
4000 U	2-NITROANILINE	830 U	DIBENZO(A,H)ANTHRACENE
830 U	DIMETHYL PHTHALATE	830 U	BENZO(GHI)PERYLENE
830 U	ACENAPHTHYLENE	20	PERCENT MOISTURE
830 U	2,6-DINITROTOLUENE		

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
 *R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

11/06/90

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*** PROJECT NO. 90-804    SAMPLE NO. 50204    SAMPLE TYPE: SOIL    PROG ELEM: NSF    COLLECTED BY: M COHEN    ***
*** SOURCE:                CITY: JEDBERG        ST: SC                    ***
*** STATION ID: SB-05      COLLECTION START: 09/17/90 1310    STOP: 00/00/00    ***
*** CASE NO.: 14888        SAS NO.:                D. NO.: X744    ***
*** UG/KG                ANALYTICAL RESULTS        UG/KG                ANALYTICAL RESULTS    ***

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4400UR 3-NITROANILINE
900UJ ACENAPHTHENE
4400UJ 2,4-DINITROPHENOL
4400UJ 4-NITROPHENOL
900UJ DIBENZOFURAN
900UJ 2,4-DINITROTOLUENE
900UJ DIETHYL PHTHALATE
900UJ 4-CHLOROPHENYL PHENYL ETHER
900UJ FLUORENE
4400UJ 4-NITROANILINE
4400UJ 2-METHYL-4,6-DINITROPHENOL
900UJ N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
900UJ 4-BROMOPHENYL PHENYL ETHER
900UJ HEXACHLORO BENZENE (HCB)
4400UJ PENTACHLOROPHENOL
900UJ PHENANTHRENE
900UJ ANTHRACENE
900UJ DI-N-BUTYL PHTHALATE
900UJ FLUORANTHENE
900UJ PYRENE
110J BENZYL BUTYL PHTHALATE
1800UJ 3,3'-DICHLORO BENZIDINE
900UJ BENZO(A)ANTHRACENE
900UJ CHRYSENE
900UJ BIS(2-ETHYLHEXYL) PHTHALATE
900UJ DI-N-OCTYL PHTHALATE
900UJ BENZO(B AND/OR K)FLUORANTHENE
900UJ BENZO-A-PYRENE
900UJ INDENO (1,2,3-CD) PYRENE
900UJ DIBENZO(A,H)ANTHRACENE
900UJ BENZO(GHI)PERYLENE
27 PERCENT MOISTURE

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REMARKS

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

11/06/90

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** PROJECT NO. 90-804 SAMPLE NO. 50205 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-06 COLLECTION START: 09/18/90 1445 STOP: 00/00/00 **
** **
** CASE NO.: 14888 SAS NO.: D. NO.: X867 **
*** **
UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

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3900UR 3-NITROANILINE
810 U ACENAPHTHENE
3900 U 2,4-DINITROPHENOL
3900 U 4-NITROPHENOL
810 U DIBENZOFURAN
810 U 2,4-DINITROTOLUENE
810 U DIETHYL PHTHALATE
810 U 4-CHLOROPHENYL PHENYL ETHER
810 U FLUORENE
3900 U 4-NITROANILINE
3900 U 2-METHYL-4,6-DINITROPHENOL
810 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
810 U 4-BROMOPHENYL PHENYL ETHER
810 U HEXACHLOROBENZENE (HCB)
3900 U PENTACHLOROPHENOL
810 U PHENANTHRENE
810 U ANTHRACENE
810 U DI-N-BUTYLPHTHALATE
810 U FLUORANTHENE
810 U PYRENE
810 U BENZYL BUTYL PHTHALATE
1600 U 3,3'-DICHLOROBENZIDINE
810 U BENZO(A)ANTHRACENE
810 U CHRYSENE
810 U BIS(2-ETHYLHEXYL) PHTHALATE
810 U DI-N-OCTYLPHTHALATE
810 U BENZO(B AND/OR K)FLUORANTHENE
810 U BENZO-A-PYRENE
810 U INDENO (1,2,3-CD) PYRENE
810 U DIBENZO(A,H)ANTHRACENE
810 U BENZO(GHI)PERYLENE
19 PERCENT MOISTURE

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*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50206 SAMPLE TYPE: PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: CITY: JEDBERG ST: SC **
** STATION ID: SD-01 COLLECTION START: 09/17/90 1555 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X748 **

UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

880 U PHENOL
880 U BIS(2-CHLOROETHYL) ETHER
880 U 2-CHLOROPHENOL
880 U 1,3-DICHLOROBENZENE
880 U 1,4-DICHLOROBENZENE
880 U BENZYL ALCOHOL
880 U 1,2-DICHLOROBENZENE
880 U 2-METHYLPHENOL
880 U BIS(2-CHLOROISOPROPYL) ETHER
880 U (3-AND/OR 4-)METHYLPHENOL
880 U N-NITROSODI-N-PROPYLAMINE
880 U HEXACHLOROETHANE
880 U NITROBENZENE
880 U ISOPHORONE
880 U 2-NITROPHENOL
880UR 2,4-DIMETHYLPHENOL
4200 U BENZOIC ACID
880 U BIS(2-CHLOROETHOXY) METHANE
880 U 2,4-DICHLOROPHENOL
880UJ 1,2,4-TRICHLOROBENZENE
880 U NAPHTHALENE
880 U 4-CHLOROANILINE
880 U HEXACHLOROBUTADIENE
880 U 4-CHLORO-3-METHYLPHENOL
880 U 2-METHYLNAPHTHALENE
880 U HEXACHLOROCYCLOPENTADIENE (HCCP)
880 U 2,4,6-TRICHLOROPHENOL
4200 U 2,4,5-TRICHLOROPHENOL
880 U 2-CHLORONAPHTHALENE
4200 U 2-NITROANILINE
880 U DIMETHYL PHTHALATE
880 U ACENAPHTHYLENE
880 U 2,6-DINITROTOLUENE

4200UR 3-NITROANILINE
880 U ACENAPHTHENE
4200 U 2,4-DINITROPHENOL
4200 U 4-NITROPHENOL
880 U DIBENZOFURAN
880 U 2,4-DINITROTOLUENE
880 U DIETHYL PHTHALATE
880 U 4-CHLOROPHENYL PHENYL ETHER
880 U FLUORENE
4200 U 4-NITROANILINE
4200 U 2-METHYL-4,6-DINITROPHENOL
880 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
880 U 4-BROMOPHENYL PHENYL ETHER
880 U HEXACHLOROBENZENE (HCB)
4200 U PENTACHLOROPHENOL
880 U PHENANTHRENE
880 U ANTHRACENE
880 U DI-N-BUTYL PHTHALATE
880 U FLUORANTHENE
880 U PYRENE
880 U BENZYL BUTYL PHTHALATE
1800 U 3,3'-DICHLOROBENZIDINE
880 U BENZO(A)ANTHRACENE
880 U CHRYSENE
880 U BIS(2-ETHYLHEXYL) PHTHALATE
880 U DI-N-OCTYL PHTHALATE
880 U BENZO(B AND/OR K)FLUORANTHENE
880 U BENZO-A-PYRENE
880 U INDENO (1,2,3-CD) PYRENE
880 U DIBENZO(A,H)ANTHRACENE
880 U BENZO(GHI)PERYLENE
25 PERCENT MOISTURE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50207 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC
** STATION ID: SD-02 COLLECTION START: 09/17/90 1535 STOP: 00/00/00
**
** CASE NO.: 14888 SAS NO.: D. NO.: X747

UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

800 U PHENOL
800 U BIS(2-CHLOROETHYL) ETHER
800 U 2-CHLOROPHENOL
800 U 1,3-DICHLOROBENZENE
800 U 1,4-DICHLOROBENZENE
800 U BENZYL ALCOHOL
800 U 1,2-DICHLOROBENZENE
800 U 2-METHYLPHENOL
800 U BIS(2-CHLOROISOPROPYL) ETHER
800 U (3-AND/OR 4-)METHYLPHENOL
800 U N-NITROSODI-N-PROPYLAMINE
800 U HEXACHLOROETHANE
800 U NITROBENZENE
800 U ISOPHORONE
800 U 2-NITROPHENOL
800UR 2,4-DIMETHYLPHENOL
3900 U BENZOIC ACID
800 U BIS(2-CHLOROETHOXY) METHANE
800 U 2,4-DICHLOROPHENOL
800UJ 1,2,4-TRICHLOROBENZENE
800 U NAPHTHALENE
800 U 4-CHLOROANILINE
800 U HEXACHLOROBUTADIENE
800 U 4-CHLORO-3-METHYLPHENOL
800 U 2-METHYLNAPHTHALENE
800 U HEXACHLOROCYCLOPENTADIENE (HCCP)
800 U 2,4,6-TRICHLOROPHENOL
3900 U 2,4,5-TRICHLOROPHENOL
800 U 2-CHLORONAPHTHALENE
3900 U 2-NITROANILINE
800 U DIMETHYL PHTHALATE
800 U ACENAPHTHYLENE
800 U 2,6-DINITROTOLUENE

3900UR 3-NITROANILINE
800 U ACENAPHTHENE
3900 U 2,4-DINITROPHENOL
3900 U 4-NITROPHENOL
800 U DIBENZOFURAN
800 U 2,4-DINITROTOLUENE
800 U DIETHYL PHTHALATE
800 U 4-CHLOROPHENYL PHENYL ETHER
800 U FLUORENE
3900 U 4-NITROANILINE
3900 U 2-METHYL-4,6-DINITROPHENOL
800 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
800 U 4-BROMOPHENYL PHENYL ETHER
800 U HEXACHLOROBENZENE (HCB)
3900 U PENTACHLOROPHENOL
800 U PHENANTHRENE
800 U ANTHRACENE
800 U DI-N-BUTYLPHTHALATE
800 U FLUORANTHENE
800 U PYRENE
800 U BENZYL BUTYL PHTHALATE
1600 U 3,3'-DICHLOROBENZIDINE
800 U BENZO(A)ANTHRACENE
800 U CHRYSENE
800 U BIS(2-ETHYLHEXYL) PHTHALATE
800UR DI-N-OCTYLPHTHALATE
800UR BENZO(B AND/OR K)FLUORANTHENE
800UR BENZO-A-PYRENE
800UR INDENO (1,2,3-CD) PYRENE
800UR DIBENZO(A,H)ANTHRACENE
800UR BENZO(GH)PERYLENE
18 PERCENT MOISTURE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

*** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50208 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SD-03 COLLECTION START: 09/17/90 1200 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X745 **
*** ** ** ** *
UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

950 U PHENOL
950 U BIS(2-CHLOROETHYL) ETHER
950 U 2-CHLOROPHENOL
950 U 1,3-DICHLOROBENZENE
950 U 1,4-DICHLOROBENZENE
950 U BENZYL ALCOHOL
950 U 1,2-DICHLOROBENZENE
950 U 2-METHYLPHENOL
950 U BIS(2-CHLOROISOPROPYL) ETHER
950 U (3-AND/OR 4-)METHYLPHENOL
950 U N-NITROSODI-N-PROPYLAMINE
950 U HEXACHLOROETHANE
950 U NITROBENZENE
950 U ISOPHORONE
950 U 2-NITROPHENOL
950UR 2,4-DIMETHYLPHENOL
4600 U BENZOIC ACID
950 U BIS(2-CHLOROETHOXY) METHANE
950 U 2,4-DICHLOROPHENOL
950UJ 1,2,4-TRICHLOROBENZENE
950 U NAPHTHALENE
950 U 4-CHLOROANILINE
950 U HEXACHLOROBUTADIENE
950 U 4-CHLORO-3-METHYLPHENOL
950 U 2-METHYLNAPHTHALENE
950 U HEXACHLOROCYCLOPENTADIENE (HCCP)
950 U 2,4,6-TRICHLOROPHENOL
4600 U 2,4,5-TRICHLOROPHENOL
950 U 2-CHLORONAPHTHALENE
4600 U 2-NITROANILINE
950 U DIMETHYL PHTHALATE
950 U ACENAPHTHYLENE
950 U 2,6-DINITROTOLUENE

4600UR 3-NITROANILINE
950 U ACENAPHTHENE
4600 U 2,4-DINITROPHENOL
4600 U 4-NITROPHENOL
950 U DIBENZOFURAN
950 U 2,4-DINITROTOLUENE
950 U DIETHYL PHTHALATE
950 U 4-CHLOROPHENYL PHENYL ETHER
950 U FLUORENE
4600 U 4-NITROANILINE
4600 U 2-METHYL-4,6-DINITROPHENOL
950 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
950 U 4-BROMOPHENYL PHENYL ETHER
950 U HEXACHLOROBENZENE (HCB)
4600 U PENTACHLOROPHENOL
950 U PHENANTHRENE
950 U ANTHRACENE
950 U DI-N-BUTYLPHTHALATE
950 U FLUORANTHENE
950 U PYRENE
950 U BENZYL BUTYL PHTHALATE
1900 U 3,3'-DICHLOROBENZIDINE
950 U BENZO(A)ANTHRACENE
950 U CHRYSENE
950 U BIS(2-ETHYLHEXYL) PHTHALATE
950 U DI-N-OCTYLPHTHALATE
950 U BENZO(B AND/OR K)FLUORANTHENE
950 U BENZO-A-PYRENE
950 U INDENO (1,2,3-CD) PYRENE
950 U DIBENZO(A,H)ANTHRACENE
950 U BENZO(GHI)PERYLENE
30 PERCENT MOISTURE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50209   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SD-04   COLLECTION START: 09/17/90   1135   STOP: 00/00/00   **
**
** CASE NO.: 14888   SAS NO.:   D. NO.: X742   **
*** ** ** ** *
UG/KG   ANALYTICAL RESULTS   UG/KG   ANALYTICAL RESULTS

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880 U PHENOL
880 U BIS(2-CHLOROETHYL) ETHER
880 U 2-CHLOROPHENOL
880 U 1,3-DICHLOROBENZENE
880 U 1,4-DICHLOROBENZENE
880 U BENZYL ALCOHOL
880 U 1,2-DICHLOROBENZENE
880 U 2-METHYLPHENOL
880 U BIS(2-CHLOROISOPROPYL) ETHER
880 U (3-AND/OR 4-)METHYLPHENOL
880 U N-NITROSODI-N-PROPYLAMINE
880 U HEXACHLOROETHANE
880 U NITROBENZENE
880 U ISOPHORONE
880 U 2-NITROPHENOL
880UR 2,4-DIMETHYLPHENOL
4200 U BENZOIC ACID
880 U BIS(2-CHLOROETHOXY) METHANE
880 U 2,4-DICHLOROPHENOL
880UJ 1,2,4-TRICHLOROBENZENE
880 U NAPHTHALENE
880 U 4-CHLOROANILINE
880 U HEXACHLOROBUTADIENE
880 U 4-CHLORO-3-METHYLPHENOL
880 U 2-METHYLNAPHTHALENE
880 U HEXACHLOROCYCLOPENTADIENE (HCCP)
880 U 2,4,6-TRICHLOROPHENOL
4200 U 2,4,5-TRICHLOROPHENOL
880 U 2-CHLORONAPHTHALENE
4200 U 2-NITROANILINE
880 U DIMETHYL PHTHALATE
880 U ACENAPHTHYLENE
880 U 2,6-DINITROTOLUENE

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4200UR 3-NITROANILINE
880 U ACENAPHTHENE
4200 U 2,4-DINITROPHENOL
4200 U 4-NITROPHENOL
880 U DIBENZOFURAN
880 U 2,4-DINITROTOLUENE
880 U DIETHYL PHTHALATE
880 U 4-CHLOROPHENYL PHENYL ETHER
880 U FLUORENE
4200 U 4-NITROANILINE
4200 U 2-METHYL-4,6-DINITROPHENOL
880 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
880 U 4-BROMOPHENYL PHENYL ETHER
880 U HEXACHLOROBENZENE (HCB)
4200 U PENTACHLOROPHENOL
880 U PHENANTHRENE
880 U ANTHRACENE
880 U DI-N-BUTYLPHTHALATE
880 U FLUORANTHENE
880 U PYRENE
880 U BENZYL BUTYL PHTHALATE
1800 U 3,3'-DICHLOROBENZIDINE
880 U BENZO(A)ANTHRACENE
880 U CHRYSENE
880 U BIS(2-ETHYLHEXYL) PHTHALATE
880 U DI-N-OCTYLPHTHALATE
880 U BENZO(B AND/OR K)FLUORANTHENE
880 U BENZO-A-PYRENE
880 U INDENO (1,2,3-CD) PYRENE
880 U DIBENZO(A,H)ANTHRACENE
880 U BENZO(GH)PERYLENE
25 PERCENT MOISTURE

```

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
 *R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50211 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: TB-01-W COLLECTION START: 09/17/90 0740 STOP: 00/00/00 **
**
** CASE NO.: 14888 SAS NO.: D. NO.: X737 **
*** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **

UG/L ANALYTICAL RESULTS

10 U PHENOL
10 U BIS(2-CHLOROETHYL) ETHER
10 U 2-CHLOROPHENOL
10 U 1,3-DICHLOROBENZENE
10 U 1,4-DICHLOROBENZENE
10 U BENZYL ALCOHOL
10 U 1,2-DICHLOROBENZENE
10 U 2-METHYLPHENOL
10 U BIS(2-CHLOROISOPROPYL) ETHER
10 U (3-AND/OR 4-)METHYLPHENOL
10 U N-NITROSODI-N-PROPYLAMINE
10 U HEXACHLOROETHANE
10 U NITROBENZENE
10 U ISOPHORONE
10 U 2-NITROPHENOL
10 U 2,4-DIMETHYLPHENOL
50 U BENZOIC ACID
10 U BIS(2-CHLOROETHOXY) METHANE
10 U 2,4-DICHLOROPHENOL
10 U 1,2,4-TRICHLOROBENZENE
10 U NAPHTHALENE
10 U 4-CHLOROANILINE
10 U HEXACHLOROBUTADIENE
10 U 4-CHLORO-3-METHYLPHENOL
10 U 2-METHYLNAPHTHALENE
10 U HEXACHLOROCYCLOPENTADIENE (HCCP)
10 U 2,4,6-TRICHLOROPHENOL
50 U 2,4,5-TRICHLOROPHENOL
10 U 2-CHLORONAPHTHALENE
50 U 2-NITROANILINE
10 U DIMETHYL PHTHALATE
10 U ACENAPHTHYLENE
10 U 2,6-DINITROTOLUENE

UG/L ANALYTICAL RESULTS

50UR 3-NITROANILINE
10 U ACENAPHTHENE
50 U 2,4-DINITROPHENOL
50 U 4-NITROPHENOL
10 U DIBENZOFURAN
10 U 2,4-DINITROTOLUENE
10 U DIETHYL PHTHALATE
10 U 4-CHLOROPHENYL PHENYL ETHER
10 U FLUORENE
50 U 4-NITROANILINE
50 U 2-METHYL-4,6-DINITROPHENOL
10 U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10 U 4-BROMOPHENYL PHENYL ETHER
10 U HEXACHLOROBENZENE (HCB)
50 U PENTACHLOROPHENOL
10 U PHENANTHRENE
10 U ANTHRACENE
10UR DI-N-BUTYLPHTHALATE
10 U FLUORANTHENE
10 U PYRENE
10 U BENZYL BUTYL PHTHALATE
20 U 3,3'-DICHLOROBENZIDINE
10 U BENZO(A)ANTHRACENE
10 U CHRYSENE
10 U BIS(2-ETHYLHEXYL) PHTHALATE
10 U DI-N-OCTYLPHTHALATE
10 U BENZO(B AND/OR K)FLUORANTHENE
10 U BENZO-A-PYRENE
10 U INDENO (1,2,3-CD) PYRENE
10 U DIBENZO(A,H)ANTHRACENE
10 U BENZO(GHI)PERYLENE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50186 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-01 COLLECTION START: 09/18/90 1500 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X746 MD NO: X746 **
**

ANALYTICAL RESULTS UG/L

30JN BROMOHEXANE
20JN CAPROLACTAM
40JN BUTYLIDENE BIS([DIMETHYLETHYL]METHYLETHYL)PHENOL

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50187 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M. COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X753 MD NO: X753 **
**

ANALYTICAL RESULTS UG/L

30JN BROMOHEXANE
100JN BUTYLIDENE BIS[(DIMETHYLETHYL)METHYLETHYL]PHENOL

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50188 SAMPLE TYPE: PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: CITY: JEDBERG ST: SC **
** STATION ID: MW-03 COLLECTION START: 09/18/90 1200 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X754 MD NO: X754 **
** **

ANALYTICAL RESULTS UG/L

60JN BUTYLIDENE BIS[(DIMETHYLETHYL)METHYLETHYL]PHENOL
30JN CAPROLACTAM
30JN BROMOHEXANE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50189 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-04 COLLECTION START: 09/18/90 1435 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X755 MD NO: X755 **
**

ANALYTICAL RESULTS UG/L

10JN CAPROLACTAM
20JN BUTYLIDENE BIS[(DIMETHYLETHYL)METHYLETHYL]PHENOL

REMARKS
HOLDING TIMES EXCEEDED(40 CFR 136, OCTOBER 26, 1984)

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50190 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: PW-01 COLLECTION START: 09/18/90 0920 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X751 MD NO: X751 **
**

ANALYTICAL RESULTS UG/L

20JN METHYLIDENE BIS[(DIMETHYLETHYL)METHYL]PHENOL

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

11/06/90

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*****
** PROJECT NO. 90-804    SAMPLE NO. 50191  SAMPLE TYPE: GROUNDWA  PROG ELEM: NSF    COLLECTED BY: M COHEN
** SOURCE: TRIDENT N. LANDFILL                CITY: JEDBERG      ST: SC
** STATION ID: PW-02          COLLECTION START: 09/18/90  1010  STOP: 00/00/00
** CASE NO.: 14888          SAS NO.:          D. NO.: X752      MD NO: X752
**
*****

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20JN BROMOHEXANE

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50201 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: S8-02 COLLECTION START: 09/18/90 1135 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X750 MD NO: X750 **
**

ANALYTICAL RESULTS UG/KG

1000J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50205   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-06   COLLECTION START: 09/18/90   1445   STOP: 00/00/00   **
** CASE NO.: 14888   SAS NO.:   D. NO.: X867   MD NO: X867   **
** ** ** **
```

ANALYTICAL RESULTS UG/KG

1000J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 90-804 SAMPLE NO. 50206 SAMPLE TYPE: PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: CITY: JEDBERG ST: SC **
** STATION ID: SD-01 COLLECTION START: 09/17/90 1555 STOP: 00/00/00 **
** CASE NO.: 14888 SAS NO.: D. NO.: X748 MD NO: X748 **
**

ANALYTICAL RESULTS UG/KG

1000J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

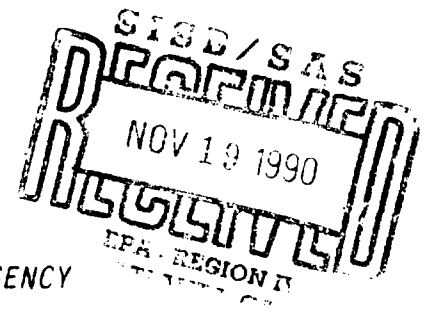
```
*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50208   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SD-03   COLLECTION START: 09/17/90   1200   STOP: 00/00/00   **
** CASE.NO.: 14888   SAS NO.:   D. NO.: X745   MD NO: X745   **
** ** ** **
```

ANALYTICAL RESULTS UG/KG

3000J 2 UNIDENTIFIED COMPOUNDS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 11/07/90

SUBJECT: Results of Pesticide/PCB Analysis;
90-804 TRIDENT N. LANDFILL
JEDBERG SC
CASE NO: 14888

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 14888 Project Number 90-804 SAS Number

Site ID. Trident N. Landfill, Jedberg, SC.

Affected Samples	Compound or Fraction	Flag Used	Reason
<u>Volatiles</u>			
DX753,738,740,741, 744,750,867	all positives	J	<quantitation limit
<u>Extractables</u>			
all soil samples	1,2,4-trichlorobenzene	J	low recovery QC spike
	2,4-dimethylphenol	R	unacceptable recovery QC spike
all samples	3-nitroaniline	R	unacceptable QC spike recovery
all water samples	di-n-butylphthalate	R	unacceptable QC spike recovery
DX740,744	butylbenzylphthalate	J	<quantitation limit
DX740,741,744	all extractables except 2,4-dimethylphenol and 3-nitroaniline	J	excessive holding time
DX755	all extractables except 3-nitroaniline and di-n-butylphthalate	J	exceeded 40CFR136 extraction holding time
DX738	di-n-octylphthalate	J	internal standard low
	benzo(b/k)fluoranthene	J	internal standard low
	benzo(a)pyrene	J	internal standard low
	indeno(1,2,3-cd)pyrene	J	internal standard low
	dibenz(a,h)anthracene	J	internal standard low
	benzo(g,h,i)perylene	J	internal standard low
DX747	di-n-octylphthalate	R	internal standard unacceptable
	benzo(b/k)fluoranthene	R	internal standard unacceptable
	benzo(a)pyrene	R	internal standard unacceptable
	indeno(1,2,3-cd)pyrene	R	internal standard unacceptable
	dibenz(a,h)anthracene	R	internal standard unacceptable
	benzo(g,h,i)perylene	R	internal standard unacceptable
<u>Pesticides</u>			
all samples	beta-BHC	R	unacceptable QC recovery
all waters	heptachlor	J	low QC spike recovery
	DDE and DDD	J	low QC spike recovery

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50186 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-01 COLLECTION START: 09/18/90 1500 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: D. NUMBER: X746 **
**

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.05U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.05UR	BETA-BHC	0.10U	ENDRIN KETONE
0.05U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.05U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.05UJ	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.05U	ALDRIN	1.0U	TOXAPHENE
0.05U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.05U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10UJ	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10UJ	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50187 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: D. NUMBER: X753 **
**

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.05U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.05UR	BETA-BHC	0.10U	ENDRIN KETONE
0.05U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.05U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.05UJ	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.05U	ALDRIN	1.0U	TOXAPHENE
0.05U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.05U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10UJ	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10UJ	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50188 SAMPLE TYPE: PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: CITY: JEDBERG ST: SC **
** STATION ID: MW-03 COLLECTION START: 09/18/90 1200 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: D. NUMBER: X754 **
**

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.05U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.05UR	BETA-BHC	0.10U	ENDRIN KETONE
0.05U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.05U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.05UJ	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.05U	ALDRIN	1.0U	TOXAPHENE
0.05U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.05U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10UJ	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10UJ	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

*** ** ** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50189 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: MW-04 COLLECTION START: 09/18/90 1435 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: D. NUMBER: X755 **
** ** ** ** **

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.05U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.05UR	BETA-BHC	0.10U	ENDRIN KETONE
0.05U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.05U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.05UJ	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.05U	ALDRIN	1.0U	TOXAPHENE
0.05U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.05U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10UJ	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10UJ	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

*** **
** PROJECT NO. 90-804 SAMPLE NO. 50190 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: PW-01 COLLECTION START: 09/18/90 0920 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: D. NUMBER: X751 **
**

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.05U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.05UR	BETA-BHC	0.10U	ENDRIN KETONE
0.05U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.05U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.05UJ	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.05U	ALDRIN	1.0U	TOXAPHENE
0.05U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.05U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10UJ	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10UJ	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50191   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: PW-02   COLLECTION START: 09/18/90   1010   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:   D. NUMBER: X752   **
** **

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UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.05U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.05U	BETA-BHC	0.10U	ENDRIN KETONE
0.05U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.05U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.05U	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.05U	ALDRIN	1.0U	TOXAPHENE
0.05U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.05U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10U	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

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*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*C-CONFIRMED BY GCMS   1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804    SAMPLE NO. 50195  SAMPLE TYPE: SOIL    PROG ELEM: NSF    COLLECTED BY: M COHEN    **
** SOURCE: TRIDENT N. LANDFILL    CITY: JEDBERG    ST: SC    **
** STATION ID: SS-01    COLLECTION START: 09/17/90  1100  STOP: 00/00/00    **
** CASE NUMBER: 14888    SAS NUMBER:    D. NUMBER: X740    **
**

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*** **	*** **
UG/KG ANALYTICAL RESULTS	UG/KG ANALYTICAL RESULTS
8.4U ALPHA-BHC	84 U METHOXYCHLOR
8.4UR BETA-BHC	17 U ENDRIN KETONE
8.4U DELTA-BHC	CHLORDANE (TECH. MIXTURE) /1
8.4U GAMMA-BHC (LINDANE)	84 U GAMMA-CHLORDANE /2
8.4U HEPTACHLOR	84 U ALPHA-CHLORDANE /2
8.4U ALDRIN	170 U TOXAPHENE
8.4U HEPTACHLOR EPOXIDE	84 U PCB-1016 (AROCLOR 1016)
8.4U ENDOSULFAN I (ALPHA)	84 U PCB-1221 (AROCLOR 1221)
17 U DIELDRIN	84 U PCB-1232 (AROCLOR 1232)
17 U 4,4'-DDE (P,P'-DDE)	84 U PCB-1242 (AROCLOR 1242)
17 U ENDRIN	84 U PCB-1248 (AROCLOR 1248)
17 U ENDOSULFAN II (BETA)	170 U PCB-1254 (AROCLOR 1254)
17 U 4,4'-DDD (P,P'-DDD)	170 U PCB-1260 (AROCLOR 1260)
17 U ENDOSULFAN SULFATE	6 PERCENT MOISTURE
17 U 4,4'-DDT (P,P'-DDT)	

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

*** ** ** ** **
 ** PROJECT NO. 90-804 SAMPLE NO. 50196 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
 ** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
 ** STATION ID: SS-02 COLLECTION START: 09/18/90 1120 STOP: 00/00/00 **
 ** CASE NUMBER: 14888 SAS NUMBER: D. NUMBER: X749 **
 ** ** ** **
 *** ** ** ** * ANALYTICAL RESULTS UG/KG ** ** ** * ANALYTICAL RESULTS UG/KG ***

8.7U ALPHA-BHC
 8.7UR BETA-BHC
 8.7U DELTA-BHC
 8.7U GAMMA-BHC (LINDANE)
 8.7U HEPTACHLOR
 8.7U ALDRIN
 8.7U HEPTACHLOR EPOXIDE
 8.7U ENDOSULFAN I (ALPHA)
 17 U DIELDRIN
 17 U 4,4'-DDE (P,P'-DDE)
 17 U ENDRIN
 17 U ENDOSULFAN II (BETA)
 17 U 4,4'-DDD (P,P'-DDD)
 17 U ENDOSULFAN SULFATE
 17 U 4,4'-DDT (P,P'-DDT)

87 U METHOXYCHLOR
 17 U ENDRIN KETONE
 CHLORDANE (TECH. MIXTURE) /1
 87 U GAMMA-CHLORDANE /2
 87 U ALPHA-CHLORDANE /2
 170 U TOXAPHENE
 87 U PCB-1016 (AROCLOR 1016)
 87 U PCB-1221 (AROCLOR 1221)
 87 U PCB-1232 (AROCLOR 1232)
 87 U PCB-1242 (AROCLOR 1242)
 87 U PCB-1248 (AROCLOR 1248)
 170 U PCB-1254 (AROCLOR 1254)
 170 U PCB-1260 (AROCLOR 1260)
 10 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50197   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE:                CITY: JEDBERG           ST: SC               **
** STATION ID: SS-03      COLLECTION START: 09/18/90 1200   STOP: 00/00/00   **
** CASE NUMBER: 14888     SAS NUMBER:                D. NUMBER: X756           **
** **

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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
9 U	ALPHA-BHC	90 U	METHOXYCHLOR
9UR	BETA-BHC	18 U	ENDRIN KETONE
9 U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
9 U	GAMMA-BHC (LINDANE)	90 U	GAMMA-CHLORDANE /2
9 U	HEPTACHLOR	90 U	ALPHA-CHLORDANE /2
9 U	ALDRIN	180 U	TOXAPHENE
9 U	HEPTACHLOR EPOXIDE	90 U	PCB-1016 (AROCLOR 1016)
9 U	ENDOSULFAN I (ALPHA)	90 U	PCB-1221 (AROCLOR 1221)
18 U	DIELDRIN	90 U	PCB-1232 (AROCLOR 1232)
18 U	4,4'-DDE (P,P'-DDE)	90 U	PCB-1242 (AROCLOR 1242)
18 U	ENDRIN	90 U	PCB-1248 (AROCLOR 1248)
18 U	ENDOSULFAN II (BETA)	180 U	PCB-1254 (AROCLOR 1254)
18 U	4,4'-DDD (P,P'-DDD)	180 U	PCB-1260 (AROCLOR 1260)
18 U	ENDOSULFAN SULFATE	11	PERCENT MOISTURE
18 U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

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PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50198   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SS-04   COLLECTION START: 09/17/90   1020   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:   D. NUMBER: X738   **
**

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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
9.4U	ALPHA-BHC	94 U	METHOXYCHLOR
9.4UR	BETA-BHC	19 U	ENDRIN KETONE
9.4U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
9.4U	GAMMA-BHC (LINDANE)	94 U	GAMMA-CHLORDANE /2
9.4U	HEPTACHLOR	94 U	ALPHA-CHLORDANE /2
9.4U	ALDRIN	190 U	TOXAPHENE
9.4U	HEPTACHLOR EPOXIDE	94 U	PCB-1016 (AROCLOR 1016)
9.4U	ENDOSULFAN I (ALPHA)	94 U	PCB-1221 (AROCLOR 1221)
19 U	DIELDRIN	94 U	PCB-1232 (AROCLOR 1232)
19 U	4,4'-DDE (P,P'-DDE)	94 U	PCB-1242 (AROCLOR 1242)
19 U	ENDRIN	94 U	PCB-1248 (AROCLOR 1248)
19 U	ENDOSULFAN II (BETA)	190 U	PCB-1254 (AROCLOR 1254)
19 U	4,4'-DDD (P,P'-DDD)	190 U	PCB-1260 (AROCLOR 1260)
19 U	ENDOSULFAN SULFATE	15	PERCENT MOISTURE
19 U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50199   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE:                                CITY: JEDBERG           ST: SC           **
** STATION ID: SS-05      COLLECTION START: 09/17/90  1245   STOP: 00/00/00   **
** CASE NUMBER: 14888      SAS NUMBER:          D. NUMBER: X743           **
**                                                                **
*** **
UG/KG      ANALYTICAL RESULTS      UG/KG      ANALYTICAL RESULTS

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8.8U  ALPHA-BHC
8.8UR BETA-BHC
8.8U  DELTA-BHC
8.8U  GAMMA-BHC (LINDANE)
8.8U  HEPTACHLOR
8.8U  ALDRIN
8.8U  HEPTACHLOR EPOXIDE
8.8U  ENDOSULFAN I (ALPHA)
18 U  DIELDRIN
18 U  4,4'-DDE (P,P'-DDE)
18 U  ENDRIN
18 U  ENDOSULFAN II (BETA)
18 U  4,4'-DDD (P,P'-DDD)
18 U  ENDOSULFAN SULFATE
18 U  4,4'-DDT (P,P'-DDT)

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88 U  METHOXYCHLOR
18 U  ENDRIN KETONE
      CHLORDANE (TECH. MIXTURE) /1
88 U  GAMMA-CHLORDANE /2
88 U  ALPHA-CHLORDANE /2
180 U TOXAPHENE
88 U  PCB-1016 (AROCLOR 1016)
88 U  PCB-1221 (AROCLOR 1221)
88 U  PCB-1232 (AROCLOR 1232)
88 U  PCB-1242 (AROCLOR 1242)
88 U  PCB-1248 (AROCLOR 1248)
180 U PCB-1254 (AROCLOR 1254)
180 U PCB-1260 (AROCLOR 1260)
9    PERCENT MOISTURE

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REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804    SAMPLE NO. 50200  SAMPLE TYPE: SOIL    PROG ELEM: NSF    COLLECTED BY: M COHEN    **
** SOURCE: TRIDENT N. LANDFILL    CITY: JEDBERG    ST: SC    **
** STATION ID: SB-01    COLLECTION START: 09/17/90  1125    STOP: 00/00/00    **
** CASE NUMBER: 14888    SAS NUMBER:    D. NUMBER: X741    **
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*** **	*** **
UG/KG	UG/KG
ANALYTICAL RESULTS	ANALYTICAL RESULTS
10 U ALPHA-BHC	100 U METHOXYCHLOR
10 U BETA-BHC	21 U ENDRIN KETONE
10 U DELTA-BHC	CHLORDANE (TECH. MIXTURE) /1
10 U GAMMA-BHC (LINDANE)	100 U GAMMA-CHLORDANE /2
10 U HEPTACHLOR	100 U ALPHA-CHLORDANE /2
10 U ALDRIN	210 U TOXAPHENE
10 U HEPTACHLOR EPOXIDE	100 U PCB-1016 (AROCLOR 1016)
10 U ENDOSULFAN I (ALPHA)	100 U PCB-1221 (AROCLOR 1221)
21 U DIELDRIN	100 U PCB-1232 (AROCLOR 1232)
21 U 4,4'-DDE (P,P'-DDE)	100 U PCB-1242 (AROCLOR 1242)
21 U ENDRIN	100 U PCB-1248 (AROCLOR 1248)
21 U ENDOSULFAN II (BETA)	210 U PCB-1254 (AROCLOR 1254)
21 U 4,4'-DDD (P,P'-DDD)	210 U PCB-1260 (AROCLOR 1260)
21 U ENDOSULFAN SULFATE	24 PERCENT MOISTURE
21 U 4,4'-DDT (P,P'-DDT)	

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
 *R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
 *C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50201   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-02   COLLECTION START: 09/18/90   1135   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:   D. NUMBER: X750   **
**

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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
9.8U	ALPHA-BHC	98 U	METHOXYCHLOR
9.8UR	BETA-BHC	20 U	ENDRIN KETONE
9.8U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
9.8U	GAMMA-BHC (LINDANE)	98 U	GAMMA-CHLORDANE /2
9.8U	HEPTACHLOR	98 U	ALPHA-CHLORDANE /2
9.8U	ALDRIN	200 U	TOXAPHENE
9.8U	HEPTACHLOR EPOXIDE	98 U	PCB-1016 (AROCLOR 1016)
9.8U	ENDOSULFAN I (ALPHA)	98 U	PCB-1221 (AROCLOR 1221)
20 U	DIELDRIN	98 U	PCB-1232 (AROCLOR 1232)
20 U	4,4'-DDE (P,P'-DDE)	98 U	PCB-1242 (AROCLOR 1242)
20 U	ENDRIN	98 U	PCB-1248 (AROCLOR 1248)
20 U	ENDOSULFAN II (BETA)	200 U	PCB-1254 (AROCLOR 1254)
20 U	4,4'-DDD (P,P'-DDD)	200 U	PCB-1260 (AROCLOR 1260)
20 U	ENDOSULFAN SULFATE		
20 U	4,4'-DDT (P,P'-DDT)	20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50202   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-03   COLLECTION START: 09/18/90   1225   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:   D. NUMBER: X866   **
**

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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
9.3U	ALPHA-BHC	93 U	METHOXYCHLOR
9.3UR	BETA-BHC	19 U	ENDRIN KETONE
9.3U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
9.3U	GAMMA-BHC (LINDANE)	93 U	GAMMA-CHLORDANE /2
9.3U	HEPTACHLOR	93 U	ALPHA-CHLORDANE /2
9.3U	ALDRIN	190 U	TOXAPHENE
9.3U	HEPTACHLOR EPOXIDE	93 U	PCB-1016 (AROCLOR 1016)
9.3U	ENDOSULFAN I (ALPHA)	93 U	PCB-1221 (AROCLOR 1221)
19 U	DIELDRIN	93 U	PCB-1232 (AROCLOR 1232)
19 U	4,4'-DDE (P,P'-DDE)	93 U	PCB-1242 (AROCLOR 1242)
19 U	ENDRIN	93 U	PCB-1248 (AROCLOR 1248)
19 U	ENDOSULFAN II (BETA)	190 U	PCB-1254 (AROCLOR 1254)
19 U	4,4'-DDD (P,P'-DDD)	190 U	PCB-1260 (AROCLOR 1260)
19 U	ENDOSULFAN SULFATE	15	PERCENT MOISTURE
19 U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50203   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SB-04   COLLECTION START: 09/17/90   1035   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:   D. NUMBER: X739   **
** ** ** **

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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
10 U	ALPHA-BHC	100 U	METHOXYCHLOR
10UR	BETA-BHC	20 U	ENDRIN KETONE
10 U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
10 U	GAMMA-BHC (LINDANE)	100 U	GAMMA-CHLORDANE /2
10 U	HEPTACHLOR	100 U	ALPHA-CHLORDANE /2
10 U	ALDRIN	200 U	TOXAPHENE
10 U	HEPTACHLOR EPOXIDE	100 U	PCB-1016 (AROCLOR 1016)
10 U	ENDOSULFAN I (ALPHA)	100 U	PCB-1221 (AROCLOR 1221)
20 U	DIELDRIN	100 U	PCB-1232 (AROCLOR 1232)
20 U	4,4'-DDE (P,P'-DDE)	100 U	PCB-1242 (AROCLOR 1242)
20 U	ENDRIN	100 U	PCB-1248 (AROCLOR 1248)
20 U	ENDOSULFAN II (BETA)	200 U	PCB-1254 (AROCLOR 1254)
20 U	4,4'-DDD (P,P'-DDD)	200 U	PCB-1260 (AROCLOR 1260)
20 U	ENDOSULFAN SULFATE		
20 U	4,4'-DDT (P,P'-DDT)	20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50204   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE:                                     CITY: JEDBERG   ST: SC   **
** STATION ID: SB-05   COLLECTION START: 09/17/90   1310   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:   D. NUMBER: X744   **
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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
11 U	ALPHA-BHC	110 U	METHOXYCHLOR
11UR	BETA-BHC	22 U	ENDRIN KETONE
11 U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
11 U	GAMMA-BHC (LINDANE)	110 U	GAMMA-CHLORDANE /2
11 U	HEPTACHLOR	110 U	ALPHA-CHLORDANE /2
11 U	ALDRIN	220 U	TOXAPHENE
11 U	HEPTACHLOR EPOXIDE	110 U	PCB-1016 (AROCLOR 1016)
11 U	ENDOSULFAN I (ALPHA)	110 U	PCB-1221 (AROCLOR 1221)
22 U	DIELDRIN	110 U	PCB-1232 (AROCLOR 1232)
22 U	4,4'-DDE (P,P'-DDE)	110 U	PCB-1242 (AROCLOR 1242)
22 U	ENDRIN	110 U	PCB-1248 (AROCLOR 1248)
22 U	ENDOSULFAN II (BETA)	220 U	PCB-1254 (AROCLOR 1254)
22 U	4,4'-DDD (P,P'-DDD)	220 U	PCB-1260 (AROCLOR 1260)
22 U	ENDOSULFAN SULFATE	27	PERCENT MOISTURE
22 U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

*** ** ** ** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50205 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SB-06 COLLECTION START: 09/18/90 1445 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: D. NUMBER: X867 **
** ** ** ** ** **

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
9.8U	ALPHA-BHC	98 U	METHOXYCHLOR
9.8UR	BETA-BHC	20 U	ENDRIN KETONE
9.8U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
9.8U	GAMMA-BHC (LINDANE)	98 U	GAMMA-CHLORDANE /2
9.8U	HEPTACHLOR	98 U	ALPHA-CHLORDANE /2
9.8U	ALDRIN	200 U	TOXAPHENE
9.8U	HEPTACHLOR EPOXIDE	98 U	PCB-1016 (AROCLOR 1016)
9.8U	ENDOSULFAN I (ALPHA)	98 U	PCB-1221 (AROCLOR 1221)
20 U	DIELDRIN	98 U	PCB-1232 (AROCLOR 1232)
20 U	4,4'-DDE (P,P'-DDE)	98 U	PCB-1242 (AROCLOR 1242)
20 U	ENDRIN	98 U	PCB-1248 (AROCLOR 1248)
20 U	ENDOSULFAN II (BETA)	200 U	PCB-1254 (AROCLOR 1254)
20 U	4,4'-DDD (P,P'-DDD)	200 U	PCB-1260 (AROCLOR 1260)
20 U	ENDOSULFAN SULFATE	19	PERCENT MOISTURE
20 U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50206   SAMPLE TYPE:   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE:              CITY: JEDBERG           ST: SC           **
** STATION ID: SD-01    COLLECTION START: 09/17/90   1555   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:           D. NUMBER: X748           **
** **

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*** UG/KG	ANALYTICAL RESULTS	*** UG/KG	ANALYTICAL RESULTS
11 U	ALPHA-BHC	110 U	METHOXYCHLOR
11UR	BETA-BHC	21 U	ENDRIN KETONE
11 U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
11 U	GAMMA-BHC (LINDANE)	110 U	GAMMA-CHLORDANE /2
11 U	HEPTACHLOR	110 U	ALPHA-CHLORDANE /2
11 U	ALDRIN	210 U	TOXAPHENE
11 U	HEPTACHLOR EPOXIDE	110 U	PCB-1016 (AROCLOR 1016)
11 U	ENDOSULFAN I (ALPHA)	110 U	PCB-1221 (AROCLOR 1221)
21 U	DIELDRIN	110 U	PCB-1232 (AROCLOR 1232)
21 U	4,4'-DDE (P,P'-DDE)	110 U	PCB-1242 (AROCLOR 1242)
21 U	ENDRIN	110 U	PCB-1248 (AROCLOR 1248)
21 U	ENDOSULFAN II (BETA)	210 U	PCB-1254 (AROCLOR 1254)
21 U	4,4'-DDD (P,P'-DDD)	210 U	PCB-1260 (AROCLOR 1260)
21 U	ENDOSULFAN SULFATE		25 PERCENT MOISTURE
21 U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

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*A-AVERAGE VALUE      *NA-NOT ANALYZED      *NAI-INTERFERENCES  *J-ESTIMATED VALUE  *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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*C-CONFIRMED BY GCMS      1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 90-804   SAMPLE NO. 50207   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SD-02   COLLECTION START: 09/17/90   1535   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:   D. NUMBER: X747   **
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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
9.7U	ALPHA-BHC	97 U	METHOXYCHLOR
9.7UR	BETA-BHC	19 U	ENDRIN KETONE
9.7U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
9.7U	GAMMA-BHC (LINDANE)	97 U	GAMMA-CHLORDANE /2
9.7U	HEPTACHLOR	97 U	ALPHA-CHLORDANE /2
9.7U	ALDRIN	190 U	TOXAPHENE
9.7U	HEPTACHLOR EPOXIDE	97 U	PCB-1016 (AROCLOR 1016)
9.7U	ENDOSULFAN I (ALPHA)	97 U	PCB-1221 (AROCLOR 1221)
19 U	DIELDRIN	97 U	PCB-1232 (AROCLOR 1232)
19 U	4,4'-DDE (P,P'-DDE)	97 U	PCB-1242 (AROCLOR 1242)
19 U	ENDRIN	97 U	PCB-1248 (AROCLOR 1248)
19 U	ENDOSULFAN II (BETA)	190 U	PCB-1254 (AROCLOR 1254)
19 U	4,4'-DDD (P,P'-DDD)	190 U	PCB-1260 (AROCLOR 1260)
19 U	ENDOSULFAN SULFATE	18	PERCENT MOISTURE
19 U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

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 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

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*** ** ** ** **
** PROJECT NO. 90-804   SAMPLE NO. 50208   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: M COHEN   **
** SOURCE: TRIDENT N. LANDFILL   CITY: JEDBERG   ST: SC   **
** STATION ID: SD-03   COLLECTION START: 09/17/90   1200   STOP: 00/00/00   **
** CASE NUMBER: 14888   SAS NUMBER:   D. NUMBER: X745   **
** ** ** **

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UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
11 U	ALPHA-BHC	110 U	METHOXYCHLOR
11UR	BETA-BHC	23 U	ENDRIN KETONE
11 U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
11 U	GAMMA-BHC (LINDANE)	110 U	GAMMA-CHLORDANE /2
11 U	HEPTACHLOR	110 U	ALPHA-CHLORDANE /2
11 U	ALDRIN	230 U	TOXAPHENE
11 U	HEPTACHLOR EPOXIDE	110 U	PCB-1016 (AROCLOR 1016)
11 U	ENDOSULFAN I (ALPHA)	110 U	PCB-1221 (AROCLOR 1221)
23 U	DIELDRIN	110 U	PCB-1232 (AROCLOR 1232)
23 U	4,4'-DDE (P,P'-DDE)	110 U	PCB-1242 (AROCLOR 1242)
23 U	ENDRIN	110 U	PCB-1248 (AROCLOR 1248)
23 U	ENDOSULFAN II (BETA)	230 U	PCB-1254 (AROCLOR 1254)
23 U	4,4'-DDD (P,P'-DDD)	230 U	PCB-1260 (AROCLOR 1260)
23 U	ENDOSULFAN SULFATE	30	PERCENT MOISTURE
23 U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

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*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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*C-CONFIRMED BY GCMS   1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

*** ** * PROJECT NO. 90-804 SAMPLE NO. 50209 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: SD-04 COLLECTION START: 09/17/90 1135 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: D. NUMBER: X742 **
*** ** *

UG/KG ANALYTICAL RESULTS

11 U ALPHA-BHC
11UR BETA-BHC
11 U DELTA-BHC
11 U GAMMA-BHC (LINDANE)
11 U HEPTACHLOR
11 U ALDRIN
11 U HEPTACHLOR EPOXIDE
11 U ENDOSULFAN I (ALPHA)
21 U DIELDRIN
21 U 4,4'-DDE (P,P'-DDE)
21 U ENDRIN
21 U ENDOSULFAN II (BETA)
21 U 4,4'-DDD (P,P'-DDD)
21 U ENDOSULFAN SULFATE
21 U 4,4'-DDT (P,P'-DDT)

UG/KG ANALYTICAL RESULTS

110 U METHOXYCHLOR
21 U ENDRIN KETONE
CHLORDANE (TECH. MIXTURE) /1
110 U GAMMA-CHLORDANE /2
110 U ALPHA-CHLORDANE /2
210 U TOXAPHENE
110 U PCB-1016 (AROCLOR 1016)
110 U PCB-1221 (AROCLOR 1221)
110 U PCB-1232 (AROCLOR 1232)
110 U PCB-1242 (AROCLOR 1242)
110 U PCB-1248 (AROCLOR 1248)
210 U PCB-1254 (AROCLOR 1254)
210 U PCB-1260 (AROCLOR 1260)
25 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/06/90

PESTICIDES/PCB'S DATA REPORT

*** ** ** ** **
** PROJECT NO. 90-804 SAMPLE NO. 50211 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: M COHEN **
** SOURCE: TRIDENT N. LANDFILL CITY: JEDBERG ST: SC **
** STATION ID: TB-01-W COLLECTION START: 09/17/90 0740 STOP: 00/00/00 **
** CASE NUMBER: 14888 SAS NUMBER: D. NUMBER: X737 **
** ** ** **

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.05U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.05UR	BETA-BHC	0.10U	ENDRIN KETONE
0.05U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.05U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.05UJ	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.05U	ALDRIN	1.0U	TOXAPHENE
0.05U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.05U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10UJ	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10UJ	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

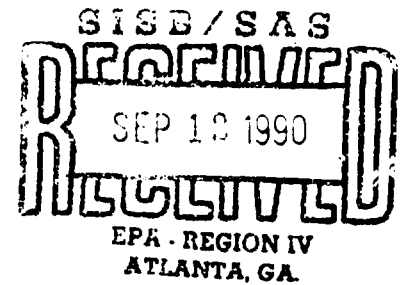
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

ENVIRONMENTAL SERVICES DIVISION
ATHENS, GEORGIA 30613



MEMORANDUM

DATE: September 7, 1990

SUBJECT: Trident North Landfill, Jedburg, SC, SSI Study Plan

FROM: Pat Stamp *Pat Stamp*
Laboratory Quality Control Specialist
Laboratory Evaluation & Quality Assurance Section

TO: Al Hanke, Chief *Al Hanke*
Site Assessment Section
Waste Programs Branch
Waste Management Division

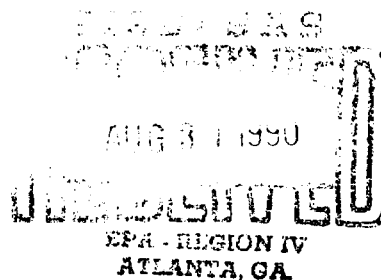
THRU: Wade Knight, Chief *Wade Knight*
Laboratory Evaluation & Quality Assurance Section

We have reviewed the subject document and have the following comments:

1. Table 1
 - a. The sample codes all begin with the letters "JL" here, but they are shown as "TL" on Figure 3.
 - b. Note the corrections marked in red.



1927 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710



C-586-8-0-248

August 27, 1990

Mr. A.R. Hanke
Waste Programs Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Subject: Study Plan
Revision 0
Trident North Landfill
Jedburg, Dorchester-Berkeley County, South Carolina
TDD No. F4-9007-35

Dear Mr. Hanke:

Enclosed please find one copy of the Screening Site Study Plan, Revision 0, for Trident North Landfill in Jedburg, Dorchester-Berkeley County, South Carolina.

If you have any questions or comments, please contact me at NUS Corporation.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'Mitch Cohen'.

Mitch Cohen, P.E.
Project Manager

Approved:

A handwritten signature in cursive script, appearing to read 'Greg Schenk'.

MC/jec

Enclosure (1)

**STUDY PLAN
SCREENING SITE INSPECTION, PHASE II
TRIDENT NORTH LANDFILL
JEDBURG, BERKELEY/DORCHESTER COUNTY, SOUTH CAROLINA
EPA ID #: SCD980558233**

Prepared Under
TDD No. F4-9007-35
CONTRACT NO. 68-01-7346

Revision 0


FOR THE

WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

AUGUST 27, 1990

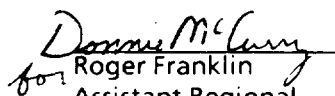
NUS CORPORATION
SUPERFUND DIVISION

Prepared By



Mitch Cohen, P.E.
Project Manager

Reviewed By


for Roger Franklin
Assistant Regional
Project Manager

Approved By



Phil Blackwell
Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-7346 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed or written consent of the EPA.

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STUDY PLAN
SCREENING SITE INSPECTION, PHASE II
TRIDENT NORTH LANDFILL
JEDBURG, BERKELEY/DORCHESTER COUNTY, SOUTH CAROLINA
EPA ID #SCD980558233
TDD NO. F4-9007-35

1.0 INTRODUCTION

The NUS Corporation Region 4 Field Investigation Team (FIT) has been tasked by the U.S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Screening Site Inspection (SSI) at the Trident North Landfill facility in Dochester/Berkeley County, South Carolina. The inspection will be performed under the authority of the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Tasks will be performed to satisfy the requirements stated in Phase II of Technical Directive Document (TDD) number F4-9007-35.

1.1 Objectives

The objectives of this Phase II inspection will be to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection will seek to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation will be made regarding future activities at the site.

Specific elements are:

- Obtain information to prepare a site-specific preliminary HRS
- Provide EPA the necessary information to make decisions on any other actions warranted at the site.

1.2 Scope of Work

The scope of this investigation will include the following activities:

- Obtain and review background materials relevant to HRS scoring of site
- Obtain aerial photographs and maps of site, if possible
- Obtain information on local water systems
- Evaluate target populations associated with the groundwater, surface water, air and onsite exposure pathways
- Conduct a survey of private wells
- Determine location and distance to nearest potable well
- Develop a site sketch
- Conduct a geophysical screening of site to determine whether buried drums may be present,
- Collect environmental samples

1.3 Schedule

To be determined

1.4 Personnel

Project Manager - Mitch Cohen

Other personnel as required

BASE MAP IS A PORTION OF THE U.S.G.S. 7.5 MINUTE QUADRANGLE MAP SUMMERVILLE, SOUTH CAROLINA, 1979.

**SITE LOCATION MAP
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER / BERKELEY
COUNTY, SOUTH CAROLINA**

FIGURE 1



1.5 Permits and Authorization Requirements

EPA is responsible for obtaining access to the site and permission to take photographs of site. In addition, EPA is responsible for all permits which may be required to accomplish this task.

1.6 Site History and Description

The Trident North/BFI Jedburg Landfill is located along State Road 16 approximately 1 mile southwest of Interstate 26. The facility lies on the Berkeley-Dorchester County line with about 60% of the landfill located in Dorchester County. The landfill occupies approximately 150 acres (Ref. 1). The geographic coordinates for the center of the landfill are 80°12'49"W longitude and 33°04'12"N latitude (Ref. 2).

Prior to 1979, the site was cultivated agricultural land (Ref. 1). The site lies atop a ridge which runs east-west and which gently slopes to the south and north. Two creeks act as northern and southern boundaries. Kelly Branch is located to the north and drains into Cypress Swamp 1.9 miles downstream. Stanley Branch is located to the south and drains into Cypress Swamp about 2 miles downstream. Runoff from the site may flow into either Kelly Branch or Stanley Branch.

Most of the waste present in the landfill is inert bulk materials such as lumber, concrete, metal bands, cardboard, shingles, tires, empty drums and asbestos. Department records show that on two occasions the landfill was allowed to accept fuel oil sludges and on one occasion burial of a wastewater treatment plant sludge was permitted. In 1980, permission was granted by the state for burial of grinding sludge from a ball-bearing manufacturer. The grinding sludge reportedly contained alloys of steel, chromium, molybdenum and vanadium (Ref. 1).

Since 1984, the Berkeley County side of the landfill has been permitted (DWP-129) for the disposal of domestic waste. No hazardous wastes are allowed to be buried in this section of the landfill as per permit requirements. There have been no remedial or removal actions associated with the Trident North Landfill (Ref. 1).

The 150 acre site of the Trident North Landfill (BFI Jedburg Landfill) was originally owned by Mr. J.M. Hodge (Rt. 4, Box 329, Summerville, SC 29483). Mr. Hodge sold the property to Landent Realty (A Partnership, 237 Confederate Circle, Charleston, SC 29407) in 1979.

Landent Realty leased the property to Trident Services, Inc. (1934 Summerville Avenue, Charleston Heights, SC 29405) for use as an Industrial Waste Landfill. Trident Services, Inc. was granted a permit to operate an industrial waste landfill (IWP-169) by the state on August 30, 1979. Trident Services operated the landfill from 1979 until some time in 1980 when Browning-Ferris Industries of South Atlantic purchased Trident Services and assumed operation of the landfill. Browning-Ferris Industries (BFI) operated the landfill under the industrial waste permit (IWP-163) from 1980 until a permit modification to accept domestic waste was granted for the Dorchester County portion of the landfill in 1984. In 1987, the state issued a new permit, DWP-129, for domestic waste disposal at the landfill (Ref. 1).

Since 1980, the shallow groundwater has been monitored at the site. Problems with the groundwater have been detected beginning with elevated levels of chromium in 1981. In 1988, monitoring well samples were tested for volatile organic compounds because of elevated total organic carbon (TOC) results with no volatile organics detected. No testing was done for semivolatile compounds or pesticides at this time. TOC is an indication of the non-volatile Organic Carbon content. Levels of heavy metals, such as chromium, have not exceeded Federal Drinking Water standard since the 1981 incident.

1.7 Regional Hydrogeology

The Trident North Landfill is located in the Atlantic Coastal Plain Physiographic Province and the Atlantic and Gulf Coastal Plain hydrogeologic setting (Ref. 3, plate 28; 4, pp. 270, 271). The climate of the area is characterized by moderate temperatures and humid days (Ref. 5, p. 7). The net annual precipitation is 5 inches and the maximum 1-year, 24-hour rainfall is 3.5 inches (Ref. 6, pp. 43, 63; 7).

The landfill is underlain by surficial soils that consist of discontinuous layers of sand and clay with minor amounts of shell and limestone extending to a depth of approximately 30 feet below land surface (bls) (Ref. 5, pp. 12, 13, 41). These surficial soils and overlying Recent unconsolidated materials comprise the shallow aquifer, which occurs under water-table conditions. The depth to groundwater in the shallow sands is approximately 20 feet bls (Ref. 1, p. 3). Transmissivities of the shallow-aquifer are generally less than 770 square feet per day (ft²/day) (Ref. 5, p. 43). The hydraulic conductivity for sediments similar to these is 1.0×10^{-3} cm/sec (Ref. 8, p. 29).

The Cooper Formation occurs beneath the surficial soils and is an impermeable sandy limestone that acts as a confining zone between the shallow aquifer and the lower Santee Limestone aquifer (Ref. 5, p. 41). The Cooper Formation is approximately 150 feet thick in the landfill area (Ref. 5, p. 12, 13).

The hydraulic conductivity for sediments similar to these is 1.0×10^{-7} cm/sec (Ref. 8, p. 29). Formations that underlie the Cooper Formation, in descending order are the Santee Limestone, the Black Mingo Formation, the Peedee Formation, the Black Creek Formation, and the Middendorf Formation (Ref. 5, p. 13). The Santee Limestone is a fossiliferous, slightly glauconitic limestone approximately 110 feet thick (Ref. 5, pp. 13, 18). The zone dips southward at 8 feet per mile and increases in thickness toward the south (Ref. 5, p. 18). The Black Mingo Formation consists of sand and limestone in the upper portion of the stratigraphic column, and clay and shale in its lower half (Ref. 5, p. 17). The formation is approximately 340 feet thick, with the base of the zone 565 feet bls in this area (Ref. 5, p. 13). The Peedee Formation is represented by calcareous clays and sands that are approximately 350 feet thick (Ref. 5, pp. 13, 17). The Black Creek Formation consist of interbedded sands and clays that are 625' thick (Ref. 5, pp. 13, 17). the Middendorf Formation is composed of clays in the lower half with silty sand in the upper. It is encountered at a depth of 1520 feet bls in the landfill area (Ref. 5, pp. 11, 13, 17).

The primary aquifer used in this area is the groundwater from the Santee Limestone and Black Mingo Formation (Ref. 5, pp. 30-34). A significant amount of hydraulic interconnection occurs between the base of the Santee and upper half of the Black Mingo Formation in this area (Ref. 5, p. 32). Most wells are of open-hole construction and penetrate into the upper sand beds of the Black Mingo Formation (Ref. 5, p. 31). These wells are under artesian conditions due to the overlying confining clays of the Copper Formation and the basal Black Mingo (Ref. 5, p. 30). The water level is approximately 20 feet bls in the landfill area (Ref. 5, p. 33). Water yields of 432,000 gals/day have been reported from wells in this area (Ref. 5, p. 31). The hydraulic conductivity for sediments similar to these in approximately 1.0×10^{-5} cm/sec (Ref. 8, p. 29).

Groundwater does occur in the deeper formations, but due to the quantity of water and expense involved in completing wells, these aquifers are not used in the Summerville area (Ref. 5, pp. 27-30). Rainfall is the main source of recharge to the aquifer (Ref. 5, p. 32). Water quality from the Santee Limestone-Black Mingo Formations aquifer is generally good in this area, but deteriorates downgradient due to increasing amounts of sodium, fluoride, and chlorides (Ref. 5, pp. 44, 53).

2.0 GEOPHYSICAL SCREENING

A geophysical screening will be conducted at the site for the purpose of delineating areas for FASP and CLP sampling around the periphery of the landfill. It is felt that geophysical techniques provide a viable alternative for locating anomalous features associated with waste disposal in landfills. The most suitable geophysical techniques applicable for this investigation is believed to be

electromagnetics. If proper subsurface conditions exist at the site this technique will provide data needed to accurately define areas of anomalous groundwater conductivity. The results will then be used in determining optimum sampling locations.

Instruments to be used are the Geonics EM31-D and EM34-S non-contacting ground conductivity meters. A summary of geophysical methods is provided in Appendix A.

3.0 FIELD ANALYTICAL SUPPORT PROJECT (FASP)

The FIT 4 Field Analytical Support Project (FASP) will be used in this study to help determine locations for the collection of samples for CLP analysis. Soil-gas probes will be installed in a grid pattern complementing the geophysical screening. Initial screening of the soil gas will be performed with a photo-ionization survey meter (HNU HW-101, Photovac TIP II, or similar instrument). At selected soil-gas probe locations, samples will be collected for analysis in the field by portable GC (Photovac 10S50, 10A10, or OVA 128 in GC mode). Field GC analysis will provide tentative identification and estimated quantitation for a short list of volatile organic compounds (benzene, toluene, and xylenes). These two procedures are useful as indicators of organic contamination. Installation of soil-gas probes and soil sample collection will be performed using the Geo-Probe (see Appendix B).

Up to 20 surface and/or subsurface samples will be collected for analysis for chromium content at the FIT 4 base lab. Analytical methods are presented in Appendix B. FASP sample locations will be chosen based on drainage pathways, disposal areas, file material and geophysical screening results. Samples are to be prepared by microwave digestion and analyzed by flame atomic absorption spectrophotometry.

FASP data is a decision-making tool used in selecting CLP sample locations. Other considerations such as file material and observation are included in choosing sample locations. Data generated from the screening survey are not intended to support listing or enforcement action. The primary purpose is to aid in the direction of CLP sampling activities. With the support of CLP results, screening data may also be used to help characterize areal extent of contamination. The data can be used to support health and safety decisions regarding use of personal protective equipment.

In order to assure a quick turn-around time, limited tentative results may be reported with appropriate QA/QC qualifiers. Results will be reported directly to the FIT project manager.

4.0 SAMPLING INVESTIGATION

The sampling investigation will include the collection of a total of 16 environmental samples consisting of surface soil, subsurface soil, monitoring well and private well samples. All of the samples except for the private well samples will be collected onsite. The collection and analysis of environmental samples will help define and characterize potential source areas of contamination. Analytical results will be compared with results collected at background/control locations. Samples will be analyzed for extractable and purgeable organic compounds, pesticides, PCBs, cyanides and metals. Analysis will be performed under the Contract Laboratory Program (CLP).

4.1 Surface Soil Sampling

Five surface soil samples will be collected as part of the investigation to determine the presence and concentrations of contaminants at depths ranging from between 0 and 2 feet. Two samples will be collected from each of the drainage ditches. An additional sample will be collected along the western property boundary to establish background/control conditions. Sample code, and descriptions may be found on Table 1 and are shown on Figure 3.

4.2 Subsurface Soil Sampling

Five subsurface soil samples will be collected during the investigation to determine the presence and concentrations of contaminants at depths ranging from between 2 and 10 feet. A subsurface soil sample will be collected at the same locations as those designed for surface soil, namely the two drainage ditches and a background/control location. Sample codes and descriptions may be found on Table 1 and are shown on Figure 3.

4.3 Existing Monitoring Well Sampling

Approximately four of eight existing monitoring wells will be sampled to determine the presence and concentration of contaminants that might have, or continue to migrate to groundwater. It appears that groundwater flow is split both north and south towards Kelly Branch and Stanley Branch. One well along the north property boundary, two wells along the south property boundary and a background well along the west property boundary were therefore selected. Since groundwater has been encountered at between about 5 and 20 feet below land surface, it does not appear that the installation of temporary monitoring wells is necessary (Ref. 9). Sample codes and descriptions may be found on Table 1 and are shown on Figure 3.

TABLE 1
SAMPLE LOCATIONS AND RATIONALE
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA

Sample Code	Sample Type	Location	Rationale
JL-SS-01	Surface Soil	Sample to be collected along the southwest boundary of the landfill property, 0-2 feet below land surface	Establish background conditions
JL-SS-02	Surface Soil	Sample to be collected at the southern end of the western drainage ditch at 0-2 feet bls	Determine the preence or absence of contamination
JL-SS-03	Surface Soil	Sample to be collected at the northern end of the western drainage ditch at 0-2 feet bls	Determine the preence or absence of contamination
JL-SS-04	Surface Soil	Sample to be collected at the northern end of the western drainage dithc at 0-2 feet bls	Determine the preence or absence of contamination
JL-SS-05	Surface Soil	Sample to be collected at the southern end of the eastern drainage ditch at 0-2 feet bls	Determine the preence or absence of contamination
JL-SB-01	Subsurface Soil	Sample to be collected along the southwest boundary of the landfill property 2-10 feet below land surface (bls)	Establish background conditions
JL-SB-02	Subsurface Soil	Sample to be collected at the norther end of the western drainage ditch at 2-10 feet bls	Determine the presence or absence of contaminants
JL-SB-03	Subsurface Soil	Sample to be collected at the northern end of the western drainage ditch at 2-10 feet bls	Determine the presence or absence of contaminants
JL-SB-04	Subsurface Soil	Sample to be collected a the northern end of the eastern drainage ditch at 2-10 feet bls.	Determine the presence or absence of contaminants

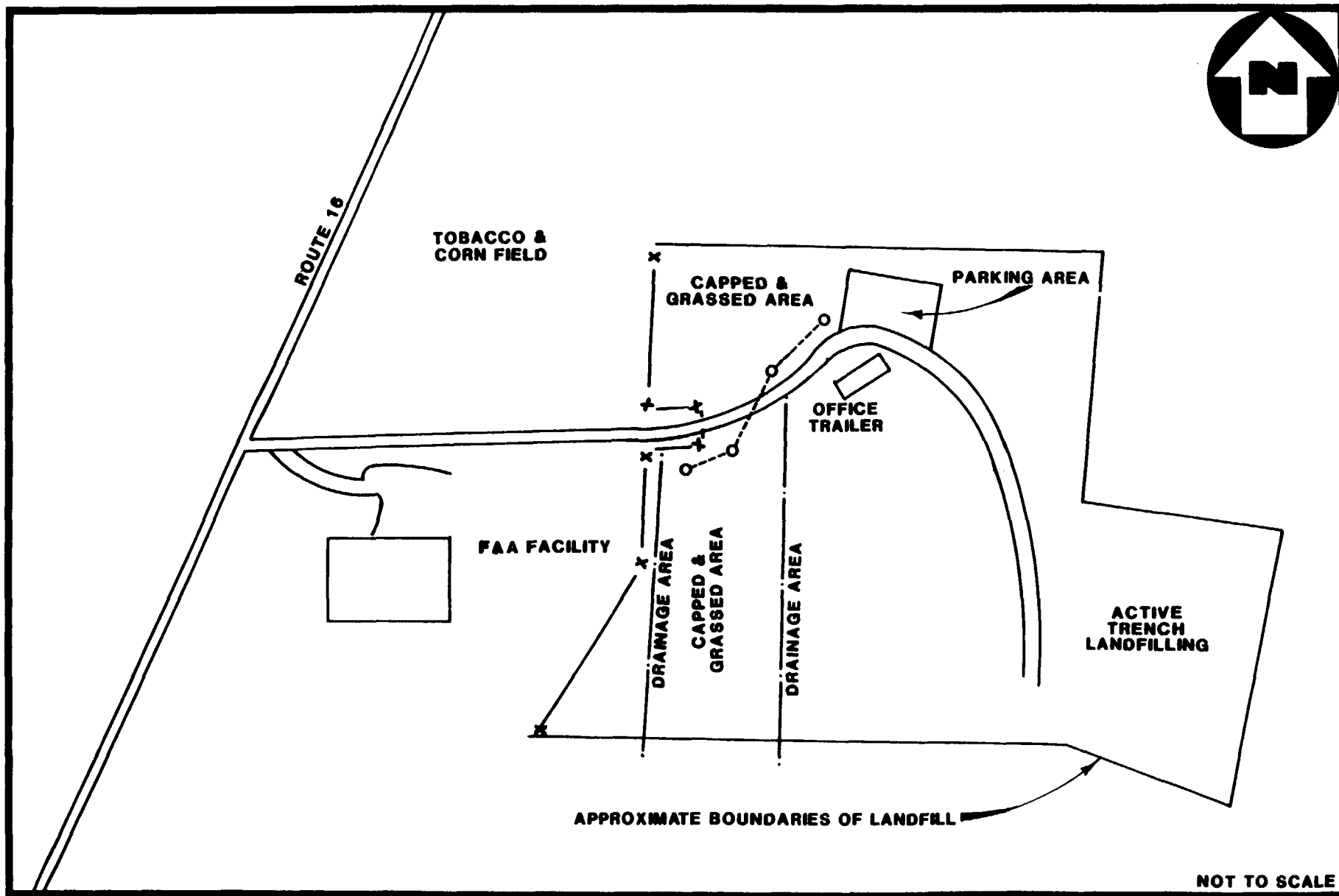
JL - Trident North Landfill
SS - Surface Soil
SB - Subsurface Soil
MW - Monitoring Well
PW - Private Well

TABLE 1

**SAMPLE LOCATIONS AND RATIONALE
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER/BERKELEY COUNTIES, SOUTH CAROLINA**

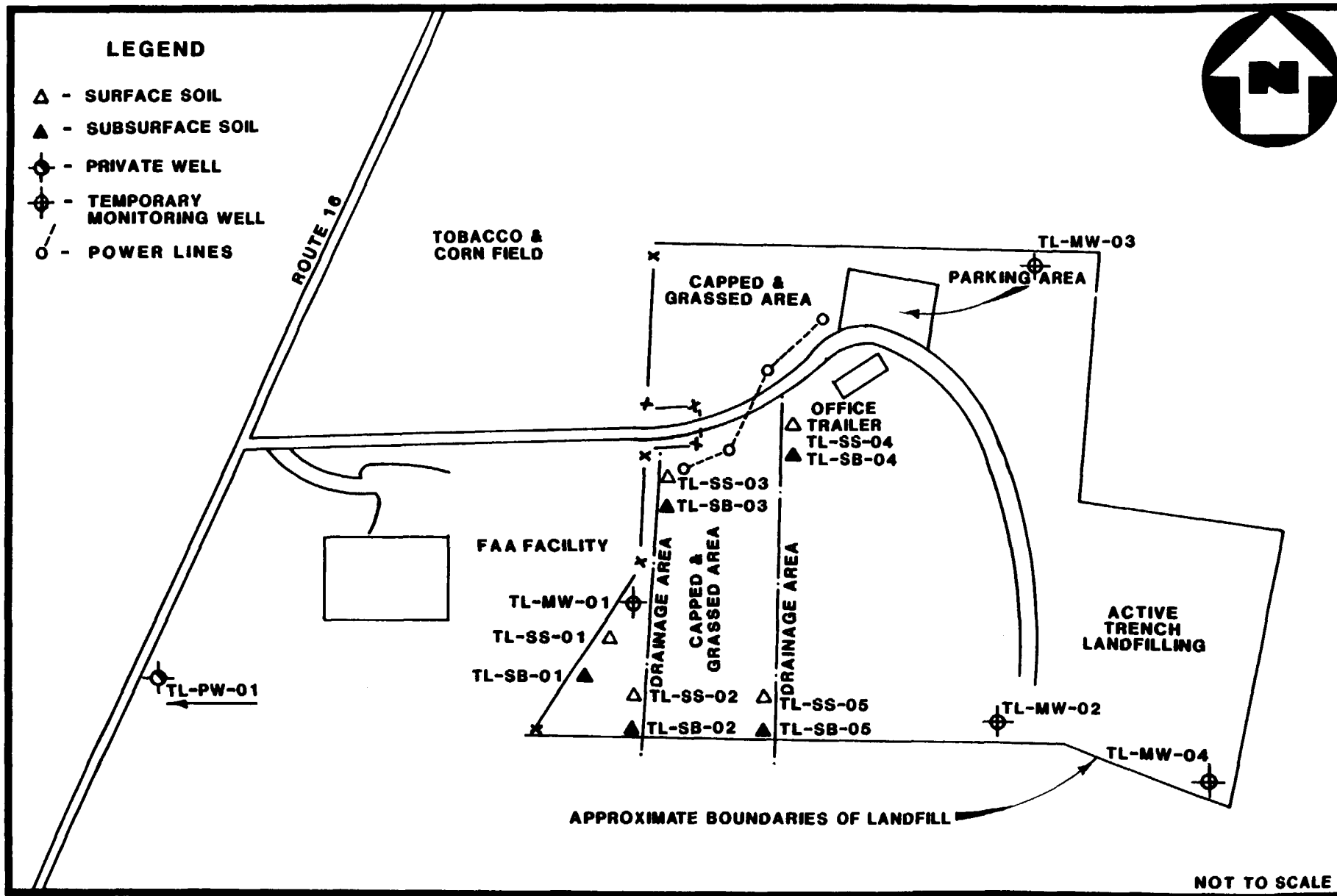
Sample Code	Sample Type	Location	Rationale
JL-SB-05	Subsurface Soil	Sample to be collected at the southern end of the eastern draiange ditch at 2-10 feet bls.	Determine the presence or absence of contaminants
JL-MW-01	Monitoring Well	Sample to be collected from an existing monitoring well located along the west landfill property boundary	Establish background conditions
JL-MW-02	Monitoring Well	Sample to be collected from an existing monitoring well located along the southern landfill proerty boundary	Determine the presence or absence of contaminants
JL-MW-03	Monitoring Well	Sample to be collected from an existing monitoring well located along the southern landfill property boundary	Determine the presence or absence of contaminants
JL-MW-04	Monitoring Well	Sample to be collected from an existing monitoring well located along the southern landfill property boundary	Determine the presence or absence of contaminants
JL-PW-01	Private Well	Sample to be collected from a private well located as near to and west of the landfill as possible	Determine the presence or absence of contaminants
JL-PW-02	Private Well	Sample to be collected from a private well located as near to and east of the landfill as possible.	Determine the presence or absence of contaminants

JL - Trident North Landfill
 SS - Surface Soil
 SB - Subsurface Soil
 MW - Monitoring Well
 PW - Private Well



**SITE LAYOUT MAP
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER / BERKELEY
COUNTY, SOUTH CAROLINA**

FIGURE 2



**SAMPLE LOCATION MAP
TRIDENT NORTH LANDFILL
JEDBURG, DORCHESTER / BERKELEY
COUNTY, SOUTH CAROLINA**

FIGURE 3

4.4 Private Well Sampling

Two private wells will be sampled in order to determine the presence and concentrations of contaminants in groundwater used as a drinking supply. The nearest available eastern and western most residents with private wells will be chosen for sampling.

4.5 Surface Water and/or Sediment Sampling

It does not appear that surface water or sediment sampling is necessary since overland flow over the sandy soils surrounding the facility would be greatly reduced. If this does not prove to be the case, these samples will be added during field activities.

4.6 Analytical and Container Requirements

Sample containers used will be in accordance with the requirements specified in the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986. The following is a description of the analysis and types of containers required.

<u>Analyses</u>	<u>Container</u>	<u>Preservatives**</u>
Ext. Organics, Water	1 gal., amber glass*	None
Volatile Organics, Water	40 ml., glass vial*	4 drops conc. HCL to pH < 2
Metals, Water	1 liter, plastic	50% HNO ₃ to pH < 2
Cyanide, Water	1 liter, plastic	NaOH to pH > 12
Ext. Organics, Soil/Sediment	8 oz., glass*	None

Volatile Organics	4 oz., glass*	None
Soil/Sediment		

Inorganics,	8 oz., glass*	None
Soil/Sediment		

* Sample container lids are lined with teflon.

** All samples will be iced to 4 C upon collection.

4.7 **Methodology**

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation will be in accordance with the standard operating procedures as specified in Section 3 and 4 of the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986.

All laboratory analyses and laboratory quality assurance procedures used during this investigation will be in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; revised June 1, 1985 or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

REFERENCES

1. David W. Nix, Bureau of Solid and Hazardous Waste Management, South Carolina Department of Health and Environmental Control, "Preliminary Assessment Update Report Trident North Landfill SCD900558233 Berkeley/Dorchester County South Carolina," prepared for EPA (March 10, 1989).
2. U.S. Geological Survey, 7.5 minute series Topographical Quadrangle Maps of South Carolina: Summerville 1958 (Photorevised 1979), Ridgeville 1979, Summerville NW 1958, Pringletown 1979, scale 1:24,000.
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8. R. Allan Freeze, John A. Cherry, Groundwater, Englewood Cliffs, New Jersey: (Prentice Hall, Inc. 1979).
9. Patrick A. Shirley, Manager, Hydrogeologic Services, General Engineering Laboratories, letter to Jim Dowland, Regional Landfill Manager, Browing-Ferris Industries, May 28, 1987. Subject: Analysis of monitoring well samples.

—

APPENDIX A

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APPENDIX A

SUMMARY OF GEOPHYSICAL METHODS

The following sections are from "Geophysical Techniques for Sensing Buried Wastes and Waste Migration" by Glaccum, R. A., and M. R. Noel, August, 1983, Technos, Inc., for Environmental Monitoring Systems Laboratory, ORD., USEPA, Las Vegas, Nevada.

ELECTROMAGNETICS (EM)*

The electromagnetic (EM) method provides a means of measuring the electrical conductivity of subsurface soil, rock, and ground water. Electrical conductivity is a function of the type of soil and rock, its porosity, its permeability, and the fluids which fill the pore space. In most cases the conductivity (specific conductance) of the pore fluids will dominate the measurement. Accordingly, the EM method is applicable both to assessment of natural geohydrologic conditions and to mapping of many types of contaminant plumes. Additionally, trench boundaries, buried wastes and drums, as well as metallic utility lines can be located with EM techniques.

Natural variations in subsurface conductivity may be caused by changes in soil moisture content, ground water specific conductance, depth of soil cover over rock, and thickness of soil and rock layers. Changes in basic soil or rock types, and structural features such as fractures or voids may also produce changes in conductivity. Localized deposits of natural organic, clay, sand, gravel, or saltrich zones will also affect subsurface conductivity.

*The term electromagnetic has been used in contemporary literature as a descriptive term for other geophysical methods, including GPR and metal detectors which are based on electromagnetic principles. However, this document will use electromagnetic (EM) to specifically imply the measurement of subsurface conductivities by low-frequency electromagnetic induction. This is in keeping with the traditional use of the term in the geophysical industry from which the EM methods originated. While the authors recognize that there are many electromagnetic systems and manufacturers, the discussion in this section is based solely on instruments which are calibrated to read in electrical conductivity units and which have been effectively and extensively used at hazardous waste sites. There is only one manufacturer of such instruments at the time of this writing.

Many contaminants will produce an increase in free ion concentration when introduced into the soil or ground water systems. This increase over background conductivity enables detection and mapping of contaminated soil and ground water at Hazardous Waste Sites (HWS), landfills, and impoundments. Large amounts of organic fluids such as diesel fuel can displace the normal soil moisture, causing a decrease in conductivity which may also be mapped, although this is not commonly done. The mapping of a plume will usually define the local flow direction of contaminants. Contaminant migration rates can be established by comparing measurements taken at different times.

The absolute values of conductivity for geologic materials (and contaminants) are not necessarily diagnostic in themselves, but the variations in conductivity, laterally and with depth, are significant. It is these variations which enable the investigator to rapidly find anomalous conditions.

Since the EM method does not require ground contact, measurements may be made quite rapidly. Lateral variations in conductivity can be detected and mapped by a field technique called profiling. Profiling measurements may be made to depths ranging from 0.75 to 60 meters. The data is recorded using strip chart and magnetic tape-recorders. This continuous measurement allows increased rates of data acquisition and improved resolution for mapping small geohydrologic features. Further, recorded data enhanced by computer processing has proved invaluable in the evaluation of complex hazardous waste sites. The excellent lateral resolution obtained from EM profiling data has been used to advantage in efforts to outline closely-spaced burial pits, to reveal the migration of contaminants into the surrounding soil, and to delineate fracture patterns.

Vertical variations in conductivity can also be detected by the EM method. A station measurement technique called sounding is employed for this purpose. Data can be acquired from depths by combining results from a variety of EM instruments, each requiring different field application techniques. Other EM systems are capable of sounding to depth of one-thousand feet or more, but have not yet been used at HWS and are not adaptable to continuous measurements.

Profiling is the most cost-effective use of the EM method. Continuous profiling can be used in many applications to increase resolution, data density, and permit total site coverage at critical sites.

At HWS, applications of EM can provide:

- Assessment of natural geohydrologic conditions;
- Locating and mapping of burial trenches and pits containing drums and/or bulk wastes;
- Determination of flow direction in both unsaturated and saturated zones;
- Rate of plume movement by comparing measurement taken at different times;
- Locating and mapping of utility pipes and cables which may affect other geophysical measurements, or whose trench may provide a permeable pathway for contaminant flow.

Although there is available a wide variety of EM equipment, most of it is intended for geophysical exploration of mineral deposits. These units have not been used at HWS and do not provide a simple conductivity reading. This document discusses only those instruments which are designed and calibrated to read directly in units of conductivity.

Conductance is measured with electronic instrumentation consisting of a transmitter coil and receiver coil. The transmitter coil radiates an electromagnetic field which induces eddy currents in the earth below the instrument. Each of these eddy current loops, in turn, generates a secondary electromagnetic field which is proportional to the magnitude of the current flowing within that loop. A part of the secondary magnetic field from each loop is intercepted by the receiver coil and produces an output voltage which (within limits) is linearly related to subsurface conductivity. This reading is a bulk measurement of conductivity, e.g., the cumulative response to subsurface conditions ranging all the way from the surface to the effective depth of the instrument.

The sampling depth of EM equipment is related to the instrument's coil spacing. Instruments with coil spacings of one, four, ten, twenty, and forty meters are commercially available. The nominal sampling depth of an EM system is taken to be approximately 1.5 times the coil spacing.

The EM sounding method can rarely identify more than two or three layers with reasonable confidence. The greater the contrast in the conductivity values of each layer, the better the results. Often, the more detailed resistivity sounding method is used to complement EM profiling data.

The results of sounding analysis are usually presented as a vertical section, in which the conductivity layers are identified as a function of depth. The analyst may be able to correlate these layers to geohydrologic units believed to exist at the site.

Although the EM technique can be used for profiling or sounding, profiling is the most effective use of the EM method. Profiling makes possible the rapid mapping of subsurface conductivity changes, and the location, delineation, and assessment of spatial variables resulting from changes in the natural setting or from many contaminants.

EM is a very effective reconnaissance tool. The use of qualitative non-recorded data can provide initial interpretation in the field. If site conditions are complex, the use of a high-density survey grid, continuously-recording instruments, and computer processing may be necessary, in order to properly evaluate subsurface conditions. When continuously-recording instruments are used, total site coverage is feasible. More quantitative information can be obtained by using conductivity data from different depth ranges. At present, three different systems must be used to acquire data from 0.75 to 60 meters. Very often, however, data from two standard depths, e.g. six and fifteen meters, is adequate to furnish depth information.

Capabilities

- The EM profile method permits rapid data acquisition, resulting in high-density and high-resolution surveys.
- Profiling data may be acquired from various discrete depths, ranging from 0.75 meters to 60 meters.
- Continuously-recording instruments (to fifteen meter depth) can increase survey speed, density, and resolution permitting total site coverage, if required.
- EM reads directly in conductivity units (mm/m) permitting use of raw data in the field, and correlation to specific conductance of ground water samples.
- EM can map local and general changes in the natural geohydrologic setting.
- EM can detect and measure the boundaries of a conductivity plume.
- Direction of plume flow can be determined from an EM conductivity map.
- EM measurements taken at different times can provide the means to compute movement rates of conservative contaminants.
- EM can detect and map burial pits and trenches of both bulk and drummed wastes.
- EM can detect and map the location of buried metallic utility lines.

Limitations

- **EM has less sounding (vertical) resolution than the resistivity method due to its limited number of depth intervals.**
- **The acquisition of data from depths of 0.75 to 60 meters requires the use of three different EM systems.**
- **Continuous data can be obtained only to depths up to approximately fifteen meters.**
- **An EM measurement is influenced by the shallower materials more than the deeper ones; this must be considered when evaluating the data.**
- **EM measurements become non-linear in zones of very high conductivity.**
- **The EM method is susceptible to noise from a number of sources, including natural atmospheric noise, powerlines, radio transmitters, buried metallic trash, pipes, cables, nearby fences, vehicles, and buildings.**

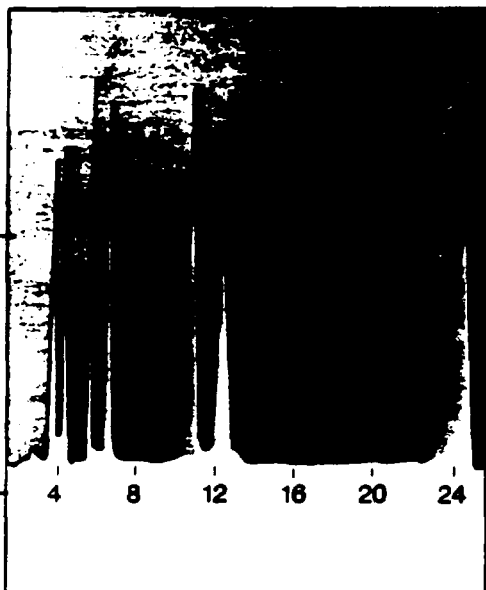
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APPENDIX B

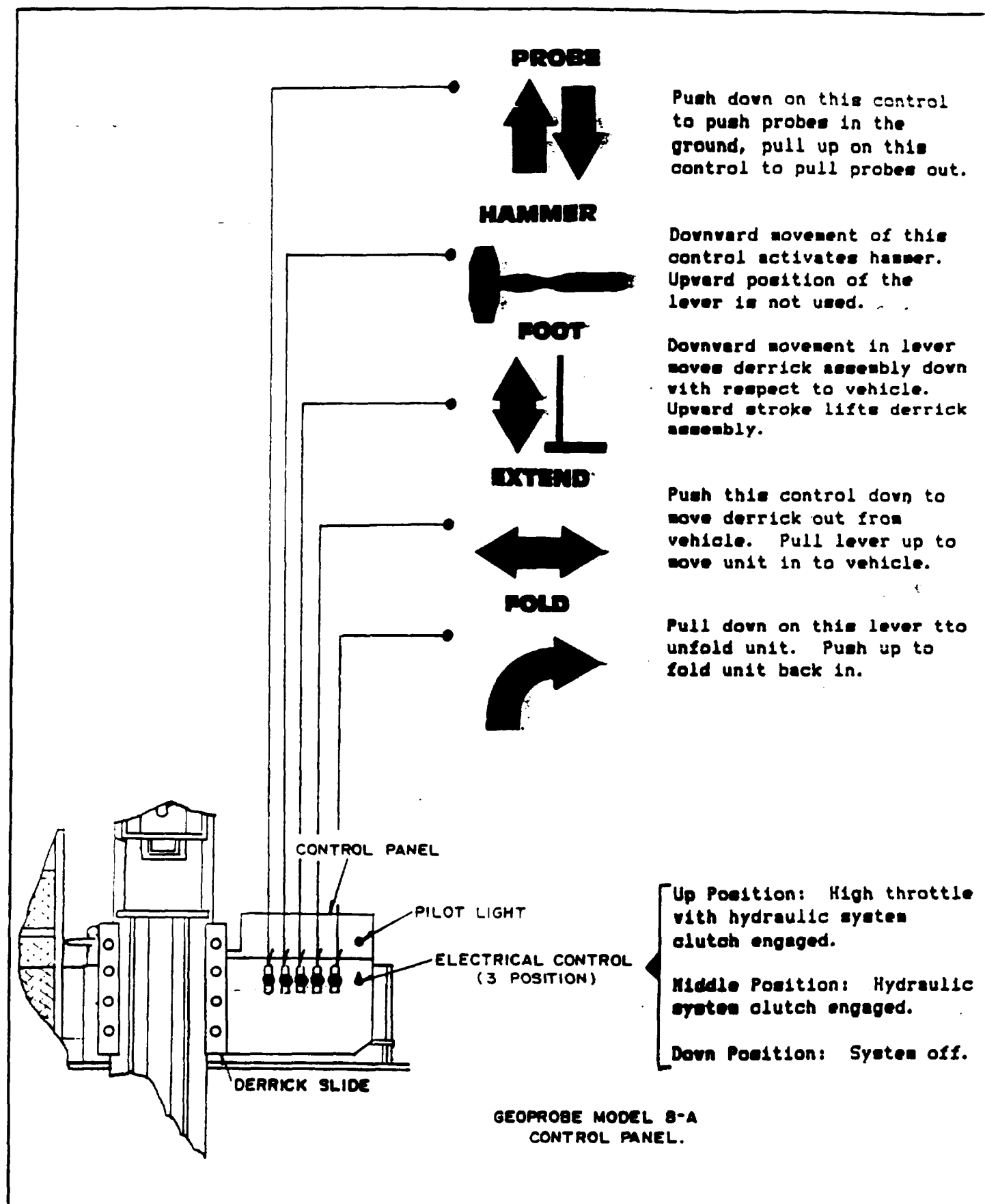
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Geoprobe

SOIL PROBING EQUIPMENT



**For Soil Vapor, Soil Core,
and Groundwater Sampling Applications**



GEOPROBE MODEL 8-M

MACHINE MAINTENANCE

CHECK THE HYDRAULIC FLUID RESERVOIR LEVEL AT THE BEGINNING OF EACH OPERATING DAY, MAINTAIN THE OIL LEVEL WITHIN ONE-HALF INCH OF THE COLD FILL LEVEL ON THE DIP STICK. APPROPRIATE OILS FOR FILLING ARE LISTED IN THIS MANUAL.

GREASE SHOULD BE APPLIED TO THE DERRICK SLIDE (TWO ZIRCKS ON EACH SIDE) AND THE DERRICK END OF THE FOLD CYLINDER (ONE FITTING) ON A WEEKLY BASIS.

CHECK THE OIL COOLING FAN EACH DAY AND MAKE SURE THAT IT IS OPERATING PROPERLY.

THIS MACHINE VIBRATES! TIGHTEN BOLTS AND HYDRAULIC FITTINGS AT LEAST MONTHLY.

KEEP TOOL THREADS CLEAN. WIRE BRUSH THEM TO REMOVE DIRT AFTER EVERY USE.

GEOPROBE MODEL 8-M
OPERATION SAFETY CAUTIONS

1. Always take vehicle out of gear and set emergency brake before engaging remote ignition.
- CAUTION: 2. If vehicle is parked on a loose or soft surface do not fully raise rear of vehicle with probe foot, as vehicle may fall or move, causing injury.
3. Always EXTEND the probe unit out from the vehicle and deploy the FOOT to clear vehicle roof line before folding the probe unit out.
4. Operators should wear OSHA approved steel toed shoes and keep feet clear of probe FOOT.
- CAUTION: 5. One person only should operate the probe machine and the assembly - disassembly of probe rods and accessories.
6. Never place hands on top of a rod while it is under the machine.
7. Turn off the hydraulic system while changing rods, inserting the hammer anvil, or attaching accessories.
8. Operator must stand to the control side of the probe machine, clear of probe foot and mast, while operating controls.
9. Wear safety glasses at all times during the operation of this machine.
10. Never exert down pressure on the probe rod so as to lift the machine base over six inches off the ground
- CAUTION: 11. Never exert down pressure on a probe rod so as to lift the rear tires of the vehicle off the ground.
12. Always remove the hammer anvil or other tool from the machine before folding the machine to the horizontal position.
- CAUTION: 13. The vehicle catalytic converter is hot and may present a fire hazard when operating over dry grass or combustibles.
14. Geoprobe operators must wear ear protection. OSHA approved ear protection for sound levels exceeding 85 dba is recommended.
15. The location of buried or underground utilities and services must be known before starting to drill or probe.
16. Shut down the hydraulic system and stop the vehicle engine before attempting to clean or service the equipment.
- CAUTION: 17. Accidental engagement of this machine may cause injury.

Training Manual

A. STEP BY STEP PROCESS FOR GATHERING SOIL VAPOR SAMPLES.

I. Positioning Geoprobe

- a) Back carrier van or pick-up to desired probing location and set park brake.
- b) Activate unit and use EXTEND control and foot cylinder to laterally extend probing unit.

NOTE: CHECK FOR CLEARANCE AT ROOF OF VEHICLE BEFORE UNFOLDING GEOPROBE

- c) Use the FOLD and FOOT controls to place unit to exact probing spot.
 1. Adjust probe axis to perpendicular and put carrier vehicle weight on probe unit.
 2. When probe axis is perpendicular to ground surface, probing is ready to begin.

II. Drilling (concrete, asphalt, etc)

- a) Insert carbide-tipped drill bit into hammer.
- b) Activate HAMMER ROTATION CONTROL by turning counter-clockwise. (This allows drill bit to spin when HAMMER and PROBE controls are activated).
- c) Use HAMMER CONTROL to activate rotation.
- d) When surface has been penetrated, turn knob clockwise.

IMPORTANT NOTE: BE SURE TO SHUT OFF THE ROTARY ACTION BEFORE DRIVING PROBE RODS.

III. Probing

- a) Insert hammer anvil in hammer
- b) Screw drive cap on end of probe rod.
- c) Screw expendable point holder onto other end of first probe rod.
- d) Slip expendable drive point into point holder.
- e) Activate hydraulics and start to probe
 1. Probe rods must remain parallel to probe cylinder shaft while probing.
 2. Use HAMMER CONTROL if unable to reach desired depth with PROBE control.

IMPORTANT NOTE: KEEP RODS SCREWED TIGHT WHILE HAMMERING.

- f) Continue probing to desired depth.
 1. If anticipated depth is more than three feet, screw another with drive cap into penetrated rod.
 2. Continue to screw rods together as probing continues until desired depth is reached.

IMPORTANT NOTE: DEACTIVATE HYDRAULICS WHILE CHANGING RODS

IV: Gathering Vapor Samples

- a) Remove hammer anvil from hammer
 - b) Screw on pull cap to end of probe rod.
 - c) Retract rod approximately 6" - 12".
 - 1. Retraction of rod disengages expendable drive point holder and allows for soil vapor to enter rod.
 - d) Unscrew pull cap and replace with gas sampling cap.
 - 1. Cap is furnished with barbed hose connector
 - e) Connect vacuum hose to barbed connector
- IMPORTANT: SHUT ENGINE OFF BEFORE TAKING SAMPLE
(Exhaust fumes can cause faulty sample data)
- f) Turn vacuum pump on and place desired vacuum pressure in vacuum tank.
 - g) Open line control valve.
 - 1. For each rod used allow for 300 (1) of volume. Example: 3 rods used = 900 (1) = .900 on gauge.
 - h) After achieving sufficient purge volume close valve and allow sample line pressure gauge to return to 0.
 - 1. This returns sample train to atmospheric temperature.
 - i) The vapor sample can now be taken.
 - 1. Pinch hose near gas sampling cap to disallow any outside vapors to enter rods.
 - 2. Insert syringe needle into center of barbed hose connector and draw out vapor sample.
 - 3. Take sample to G.C. to be analyzed.
 - 4. Periodically drain the vacuum tank.

V. Retracting Probe Rods

- a) Activate Unit
 - b) Unscrew gas sampling cap and replace with pull cap.
 - c) Retract and unscrew rods.
- NOTE: DEACTIVATE HYDRAULICS WHILE CHANGING RODS

VI. Folding Probing Unit into Carrier Van

- a) Use FOOT, FOLD, and EXTEND controls to load

B. MAINTENANCE

I. Cleaning Rods

- a) Rods must be kept clean
 - 1. GC will indicate dirty rods
 - 2. Alconox detergent and wire brush to wash rods and threads
 - 3. Distilled H₂O to rinse
 - 4. Let Dry

II. Machine Maintenance

- a) Check hydraulic fluid level at beginning of each operating day.
 - 1. Maintain oil within 1/2" of the cold fill level on dip stick.
 - 2. Hydraulic oil/filter should be changed after the first 250 hrs. of service and every 1000 hrs. of operation or one year of service thereafter.
 - 3. Check the oil cooling fan each day to make sure it is operating properly.
 - 4. Tighten bolts and hydraulic fittings at least monthly.
 - 5. Check hydraulic hoses for leaks.
- b) Keep syringes clean
- c) Grease Zerks
 - 1. Show zerk locations on machine
 - 2. Apply grease to Derrick slide (2 zerks on each side) weekly.
 - 3. Apply grease to Derrick end of the Fold Cylinder weekly.
- d) Broken Hose or Faulty Hydraulics.
 - 1. To manually fold probe unit, unscrew two hydraulic lines (hose #8 & 9 in operator's manual) that attach to FOLDING CONTROL on control Panel and fold unit in carrier van.
 - 2. Unscrew Telescope hydraulic lines (hose #10 & 11).
 - 3. Unit can now slide into carrier van by carefully reversing carrier van against a solid structure (tree, concrete wall, etc), until probing unit is completely in van.

Geoprobe Systems

QUALITY ASSURANCE MEMORANDUM

TO: ALL SOIL GAS SAMPLERS.

SUBJECT: VACUUM SEALING OF SOIL GAS SAMPLING SYSTEM.

Active sampling of soil gas requires the application of reduced pressure (vacuum) to induce flow from the soil matrix into the sampling system. As a quality control measure, it is important that the operator take steps necessary to insure vacuum tightness of the sampling system. Listed below are procedures which Geoprobe users report employing in order to assure vacuum tightness of the soil gas sampling system.

1.) USE TEFLON TAPE SEALANT ON ALL ROD JOINTS. The use of two rounds of 1/2" wide PTFE Teflon Thread Seal Tape is recommended. Such tape need not be applied to the point holder used at the tip of the leading rod, but should be applied to each rod joint thereafter. Many factors can cause leakage at a rod joint. Don't take chances, use teflon tape. This product is normally available at your local plumbing or hardware supplier.

2.) USE AN "O" RING INSIDE GEOPROBE SAMPLE CAPS (Part No. AT-15A) OR SWITCH TO THE NEW GEOPROBE GAS SAMPLING ADAPTER (Part No. AT-151):

A perfect vacuum seal can be assured with your present gas sampling caps by inserting an "O" ring into the sample cap. Sample O-Rings are included with this memo. Simply insert an O-Ring into the threaded end of your sample cap as shown in Figure 1. Screw the cap onto the rod and tighten 1/4 turn with a wrench. Note here also that you should be using teflon tape to seal the threads on the brass tubing insert which is threaded into the top of the cap.

Removal of the O-Ring from the sample cap for cleaning or replacement is easy also; a short length of wire formed to a hook accomplishes this job quickly. The O-Rings attached for this purpose are standard, industrial nitrile polymer, 90 durometer, AS 568-114

O-Rings (Geoprobe Part No. AT-150, Cost: \$2.50 for a pack of 25). 70 durometer O-Rings would also be acceptable and also widely available.

A good alternative to the standard AT-15A gas sampling cap is the new Geoprobe AT-151 Gas Sampling Adapter (Fig. 2). This Adapter is easily twisted into the bore of Geoprobe Rods for gas sampling. Insertion of the sample cap in this manner compresses the adapter's O-Ring, forming a vacuum-tight seal between the adapter and the rod. It is recommended that the user wipe the bore with a small rag or brush before inserting the adapter. Our testing has shown these adapters to be very effective and dependable with the added benefit of speed and reduced cost (\$30/ea. opposed to \$40/ea. for the standard gas sampling cap.) The bore opening at the male end on older Geoprobe rods may have to be chamfered with a file or air grinder to accept this new cap. This new gas sampling adapter is machined from stainless steel and is available for immediate delivery.

3.) PERFORM DAILY CHECK ON THE SAMPLING TRAIN: Vacuum leakage is a problem for everyone who works with vacuum. Outside your sampling system is a whole atmosphere full of bouncing molecules anxious to get in before your soil gas does. Here are some steps you can take to keep them out:

> CHECK YOUR SAMPLING TUBE FOR TIGHTNESS. The process is easy. Most Geoprobe operators use the Geoprobe Vacuum/Volume system while others employ similar systems of their own design. The first part of the system to check is the line valve gauge and vinyl and silicone sampling tubing. Place a plug in the end of the sample tubing that you normally place on the gas sampling cap (the butt end or cap of a felt tip pen works well for this purpose). Open the sampling system line valve and apply 20" Hg of vacuum from the system vacuum source. Since the sample line is plugged, the line vacuum gauge should also register 20" Hg. Now, close the line valve. With the sampling train "shut in" in this manner the vacuum measured at the line gauge should remain at 20" Hg. If pressure at this gauge increases, then you have a leak. A hole in the vinyl tubing is the most likely cause. Attempt to isolate the cause of leakage by changing portions of the tubing. The maximum acceptable leakage rate here should be 2" Hg in 5 minutes.

> CHECK YOUR VACUUM TANK: Are you accurately measuring the volume of gas you pull from the ground, or do you have a leak in your sampling system? Here's how to measure: Close the line valve on the system. Pump the vacuum tank down to 20" Hg of vacuum. Shut off the pump and record the time and pressure. Check the system again in a few minutes.

In general, the purging of a soil gas point is performed in less than five minutes. Therefore there should certainly be no detectable change in the tank pressure in a five minute period. Maximum allowable leakage rate under most conditions should be 1/2 liter per hour as measured on the tank gauge. If your system exceeds this rate there are some places to begin looking: 1) Check the exhaust from the vacuum pump by covering it with your finger. If you feel vacuum pressure beginning to build, then there is leakage past the system check valve. The check valve may need cleaned or replaced. 2) Check the sample line, suction at this point would indicate leakage past the line valve (your partner must have sucked some sand into the sampling system while you weren't looking), this valve may need to be cleaned or replaced. 3) Other places for leakage include the system tubing and the tank drain valve. Do not attempt soil gas sampling until you have corrected leakage.

> LIMIT THE ALLOWABLE VACUUM RECOVERY PERIOD FOR SOIL GAS SAMPLING: Normal practice with Geoprobe users is to first purge a certain volume from the rod string. During this period, the entire sampling train, from tank to the sampling end of the rods, is under vacuum. Once the desired purge volume has been removed, the rods are closed off by closing the system line valve. With the line valve shut, the rods now return to atmospheric pressure (in most cases). Under ideal operating conditions, the soil at the rod tip will yield sufficient gas to return the rod string to atmospheric pressure in less than one minute. It should be standard practice for the probe operator to record the time required for the rod string to return to atmospheric pressure. This is normally termed the "recovery" time. The longer the recovery time, the greater the effect of any leakage in the sampling system. Recovery periods greater than 10 minutes should be considered suspect and the operator should consider changing either the sampling depth, location, length of pull-back from the sampling tip, or switch the technique entirely from soil gas to grab sampling and analysis of soil.

> MAKE SAMPLING SYSTEM LEAK CHECKS A ROUTINE PROCEDURE: These are not lengthy, time consuming quality control procedures that we have discussed here. These procedures should become second nature to field personnel. Tubing assemblies can easily be checked three times per day. We recommend that the vacuum/volume system be checked at the beginning of each working day. Provide spaces on field sampling data forms for recording the results of pressure tests on the sampling system and for recording the pressure recovery time at field sample points.

FEEDBACK? Do you have pointers that you are willing to share regarding quality control measures in soil gas sampling? Soil gas sampling procedures in general? Please let us know. We are anxious to discuss them and hopefully share your suggestions with other field practitioners.

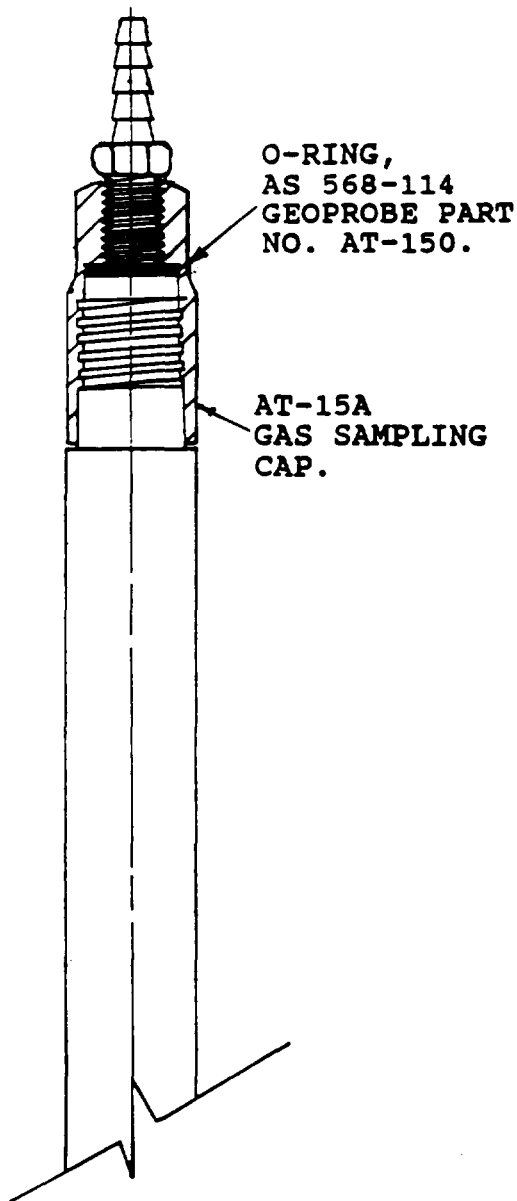


FIG. I

USE OF GEOPROBE
AT-15A GAS SAMPLING
CAP WITH O-RING SEAL.

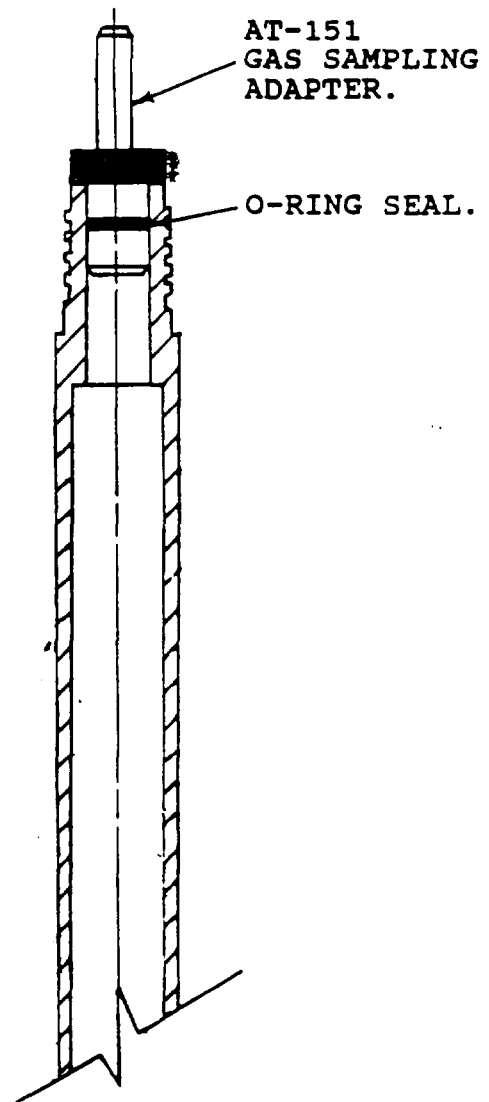


FIG. II

GEOPROBE GAS SAMPLING
ADAPTER INSERTED INTO
BORE OF GEOPROBE ROD.

MICROWAVE APPLICATION NOTE FOR ACID DIGESTION

Sample Type: Soil

Summary:

This method provides for the acid digestion of soil in a closed Teflon^{*} PFA vessel using microwave heating for analysis by spectroscopic or wet chemical methods.

Required Equipment:

MDS-81D Microwave Instrument, Teflon PFA Vessels (120 ml size) with pressure relief valve, Digestion Turntable, Capping Station.

Reagents:

Nitric Acid (70%)
Hydrogen Peroxide (30%)

Method:

1. Transfer 1.0 g of sample into a vessel and add 10 ml of nitric acid. Place a safety valve and cap on the vessel and then tighten cap using the Capping Station. Place the vessel in the turntable and attach a venting tube.
2. Repeat step 1 until the turntable contains 12 vessels.
3. Turn the MDS-81D exhaust on to the maximum fan speed. Activate the turntable so that it is rotating.
4. Program the instrument for 2 minutes 30 seconds time and 100% power in program 1, and 10 minutes at 80% power in program 2. Depress the START key and allow the sample mixtures to heat.

* Teflon is DuPont's registered trademark for its fluoropolymer resins.

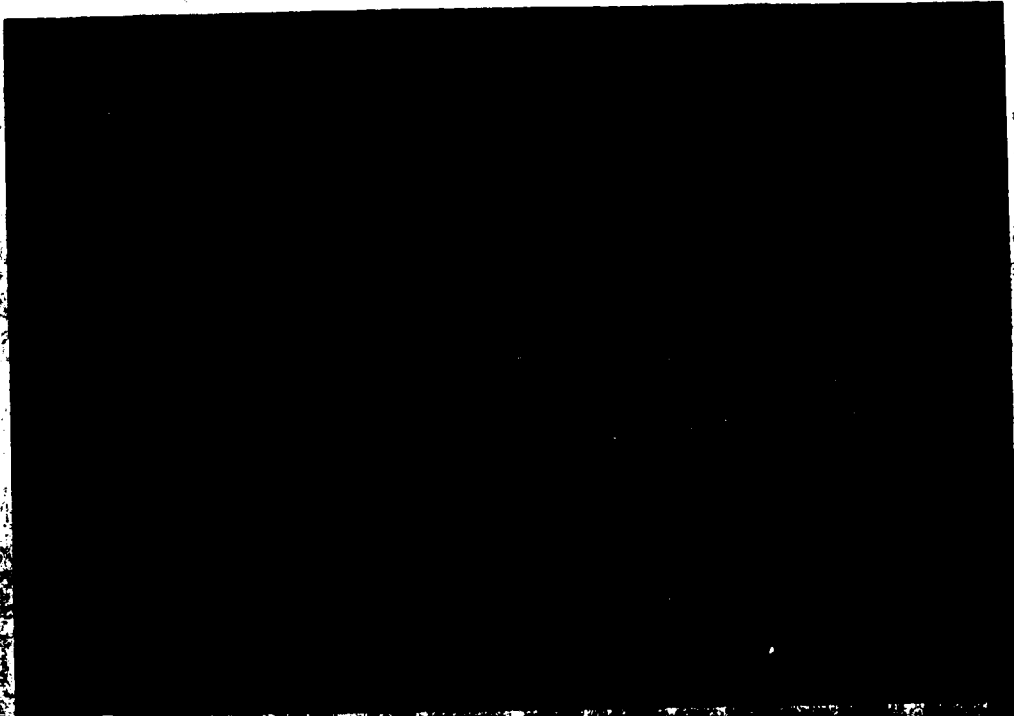
5. Allow the solutions to cool for 5 minutes and manually vent each vessel. Open the vessels and add 5 ml of 30% hydrogen peroxide dropwise. When the effervescence stops, filter the solutions into appropriate containers.

NOTE: This procedure is a reference starting point for sample digestion using the MDS-81D and may need to be modified or changed to obtain the required results on your sample.

CAUTION: Manual venting of CEM closed vessels should only be performed when the vessel contents are at or below room temperature to avoid the potential for chemical burns. When venting vessels, it is recommended that hand, eye and body protection be worn.

Test Methods for Evaluating Solid Waste

Volume 1A: Laboratory Manual
Physical/Chemical Methods



METHOD 7190

CHROMIUM (ATOMIC ABSORPTION, DIRECT ASPIRATION)

1.0 SCOPE AND APPLICATION

1.1 See Section 1.0 of Method 7000.

2.0 SUMMARY OF METHOD

2.1 See Section 2.0 of Method 7000.

3.0 INTERFERENCES

3.1 See Section 3.0 of Method 7000 if interferences are suspected.

3.2 An ionization interference may occur if the samples have a significantly higher alkali metal content than the standards. If this interference is encountered, an ionization suppressant (KCl) should be added to both samples and standards.

3.3 Background correction may be required because nonspecific absorption and scattering can be significant at the analytical wavelength. Background correction with certain instruments may be difficult at this wavelength due to low-intensity output from hydrogen or deuterium lamps. Consult the specific instrument manufacturer's literature for details.

4.0 APPARATUS AND MATERIALS

4.1 For basic apparatus, see Section 4.0 of Method 7000.

4.2 Instrument parameters (general):

- 4.2.1 Chromium hollow cathode lamp.
- 4.2.2 Wavelength: 357.9 nm.
- 4.2.3 Fuel: Acetylene.
- 4.2.4 Oxidant: Nitrous oxide.
- 4.2.5 Type of flame: Fuel rich.
- 4.2.6 Background correction: Not required.

5.0 REAGENTS

5.1 See Section 5.0 of Method 7000.

5.2 Preparation of standards:

5.2.1 **Stock solution:** Dissolve 1.923 g of chromium trioxide (CrO_3 , analytical reagent grade) in Type II water, acidify with redistilled HNO_3 , and dilute to 1 liter. Alternatively, procure a certified standard from a supplier and verify by comparison with a second standard.

5.2.2 Prepare dilutions of the stock solution to be used as calibration standards at the time of analysis. The calibration standards should be prepared using the same type of acid and at the same concentration as will result in the sample to be analyzed after processing.

6.0 SAMPLE COLLECTION, PRESERVATION, AND HANDLING

6.1 See Chapter Three, Section 3.1.3, Sample Handling and Preservation.

7.0 PROCEDURE

7.1 Sample preparation: The procedures for preparation of the sample are given in Chapter Three, Section 3.2.

7.2 See Method 7000, Paragraph 7.2, Direct Aspiration.

8.0 QUALITY CONTROL

8.1 See Section 8.0 of Method 7000.

9.0 METHOD PERFORMANCE

9.1 The performance characteristics for an aqueous sample free of interferences are:

Optimum concentration range: 0.5-10 mg/L with a wavelength of 357.9 nm.
Sensitivity: 0.25 mg/L.
Detection limit: 0.05 mg/L.

9.2 For concentrations of chromium below 0.2 mg/L, the furnace procedure (Method 7191) is recommended.

9.3 Precision and accuracy data are available in Method 218.1 of Methods for Chemical Analysis of Water and Wastes.

9.4 The data shown in Table 1 were obtained from records of state and contractor laboratories. The data are intended to show the precision of the combined sample preparation and analysis method.

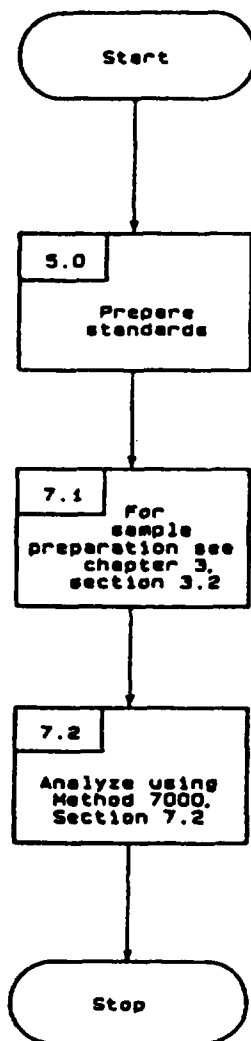
10.0 REFERENCES

1. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-82-055, December 1982, Method 218.1.
2. Gaskill, A., Compilation and Evaluation of RCRA Method Performance Data, Work Assignment No. 2, EPA Contract No. 68-01-7075, September 1986.

TABLE 1. METHOD PERFORMANCE DATA

Sample Matrix	Preparation Method	Laboratory Replicates
Wastewater treatment sludge	3050	6,100, 6,000 ug/g
Emission control dust	3050	2.0, 2.8 ug/g

METHOD 7190
CHROMIUM (ATOMIC ABSORPTION, DIRECT ASPIRATION)



TRICKEN + N LSL
SCD 980 558 233

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.	
1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. (Extra charge)	
2. <input type="checkbox"/> Restricted Delivery (Extra charge)	
3. Article Addressed to: MR BRIAN WINTZEN BROWNING FERRIS IND. 237 FARMINGTON Rd. SUMMERVILLE S.C. 29483	4. Article Number 44962414
Type of Service <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>BFI</i>	
7. Date of Delivery <i>9-14-90</i>	

ACCESS INFORMATION SHEET

Site Name: <u>Trident North Landfill</u> Site Address: <u>Road 16</u> <u>Jedburg, SC 29438</u> EPA ID #: <u>SCD980558233</u>	FIT Project Manager: <u>Mitch Cohen</u> FIT State Coordinator: <u>John Jenkins</u> EPA Contact: <u>Earl Bozeman</u> Field Date: <u>September 17, 1990</u> TDD Number: <u>F4-9007-35</u>
--	--

	File Information	Verification
Facility Owner/Operator Address Phone No. Principal Contact		Contact Brian Wintzen (803) 875-7116 (4900) BFI Charleston 237 Farmington Rd Summerville SC. 29483
Landowner Address Phone No. Principal Contact (if different from above)		
Date of Information		

Date Access Required
 (3 weeks prior to field date)

Date Information Submitted to EPA

Comments:

ACCESS INFORMATION SHEET

Site Name:	Trident North Landfill	FIT Project Manager:	Mitch Cohen
Site Address:	Road 16	FIT State Coordinator:	John Jenkins
	Summerville, South Carolina	EPA Contact:	Earl Beeman
	Dorchester / Berkeley County 29438	Field Date:	Sept. 17, 1990
EPA ID #:	SCD980558233	TDD Number:	F4-9007-35

	File Information	Verification
Facility Owner/Operator Address Phone No. Principal Contact	Browning Ferris Industries 237 Farmington Road Summerville, South Carolina 29438 (803) 871-7116 Allen Walker, Landfill manager	Dorchester County Real Estate Update TMS Number 122 00 00 054 (SAME)
Landowner Address Phone No. Principal Contact (if different from above)	SAME	(SAME)
Date of Information	July 26, 1990	July 26, 1990

Date Access Required
(3 weeks prior to field date)

8/27/90

Date Information Submitted to EPA

7-30-90

Comments:



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4WD-WPB

DATE: 8/31/90

Mr. Phil Blackwell
NUS Corporation
1927 Lakeside Parkway
Tucker, Georgia 30084

Dear Mr. Blackwell:

This letter concerns the proposed/completed FIT report on the following CERCLA site:

Site Name: TRIDENT NORTH LANDFILL

Site I.D.#: SCD480558233

Site Reference#: 3380

EPA Project Manager: EARL BOZEMAN

The above site has been assessed by EPA and a disposition made on it. Therefore, it has now been assigned to FIT for the following action:

 NFRAP

 PA

 SSI Phase I (PAR)

 SSI Phase II

 LSI Evaluation

 LSI

 X Others *UTILIZE FASP TO LOCATE SUITABLE CLP LOCATION FOR BACKGROUND SAMPLES IN CONJUNCTION WITH PHASE II SSI. ALSO UTILIZE GEOPHYSICS TO DETERMINE BOUNDARIES OF FILL AREA*

Sincerely,

Susan Deihl

Susan M. Deihl, Chief
North Unit
Site Assessment Section

cc: Fran Harrell

Acknowledging receipt of assignment

Phil Blackwell Date 09/07/90



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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 NFRAP

 PA

 SSI Phase I (PAR)

 SSI Phase II

 LSI Evaluation

 LSI

 X Others *Utilize FASP to locate suitable CLP location for background samples in conjunction with Phase II SSI. Also utilize geophysics to determine boundaries of fill area*

Sincerely,

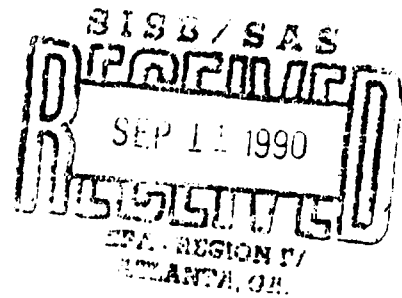
Susan M. Deihl, Chief
North Unit
Site Assessment Section

cc: Fran Harrell

Acknowledging receipt of assignment

Phil Blackwell Date 09/07/90

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV, ATHENS, GEORGIA



MEMORANDUM

DATE: SEP 10 1990

SUBJECT: Document Review: Screening Site Inspection Study Plan, Trident North Landfill, Jedburg, Dorchester-Berkeley County, South Carolina;
ESD Project No. 90E-492

FROM: Jonathan Vail, Hydrogeologist
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

Jonathan Vail

TO: Al Hanke, Chief
Site Investigation Section
Site Investigation and Support Branch
Waste Management Division

Al Hanke

THRU: William R. Bokey, Chief
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

William R. Bokey

The activities identified in the Screening Site Inspection Study Plan for the Trident North Landfill site located in Jedburg, South Carolina appear acceptable to the ESD pending the following correction:

- Page 9 & 10, Table 1 and Figure 3. The table uses JL for the prefix in the sample codes and the figure uses TL. The table and figure should correlate.

If you have any questions or comments, please call me at FTS 250-3390.

cc: Finger/Wright
Bokey/Hall
Knight
Franklin